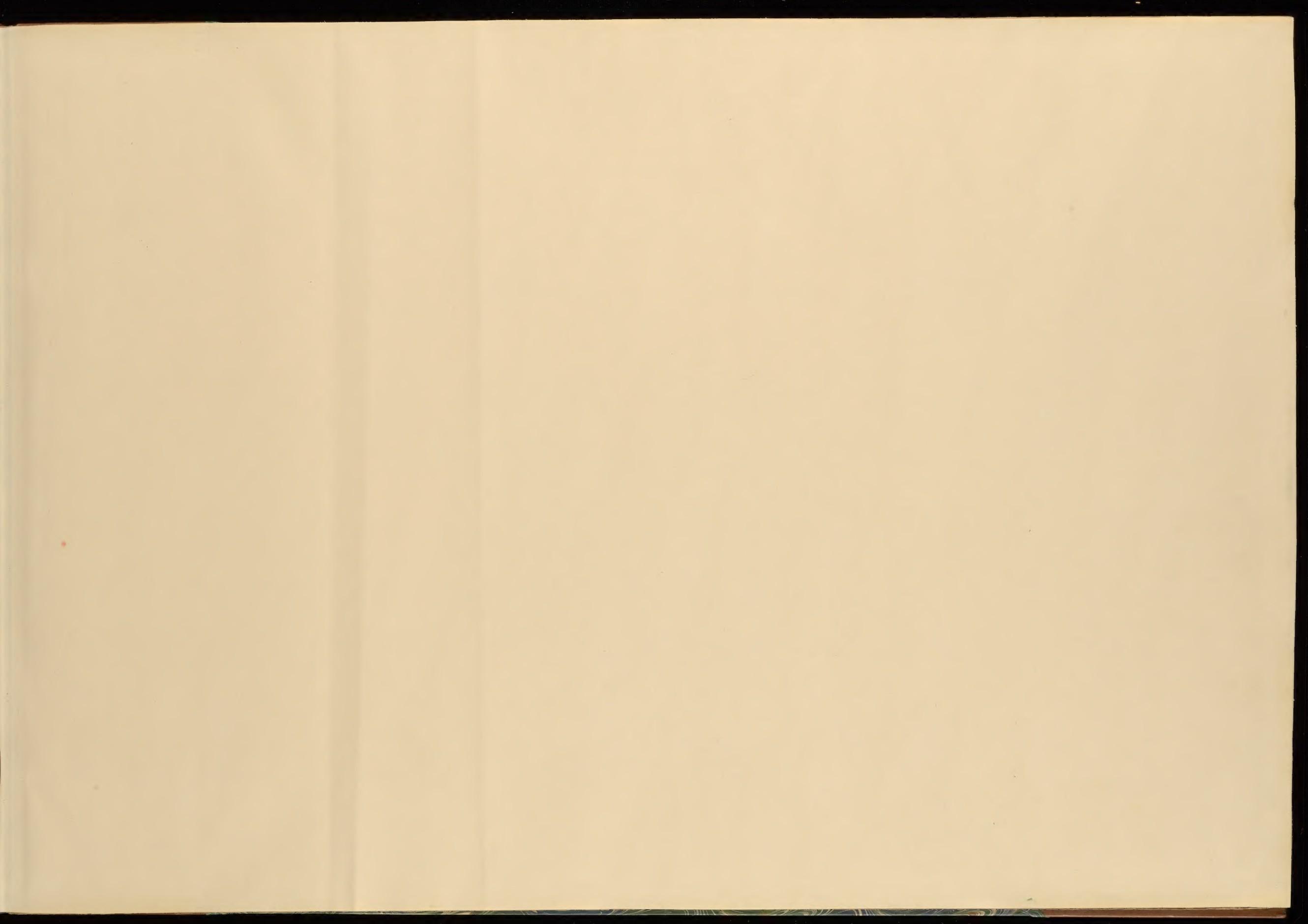


EASTERN AND EGYPTIAN
SCENERY, RUINS, &c.

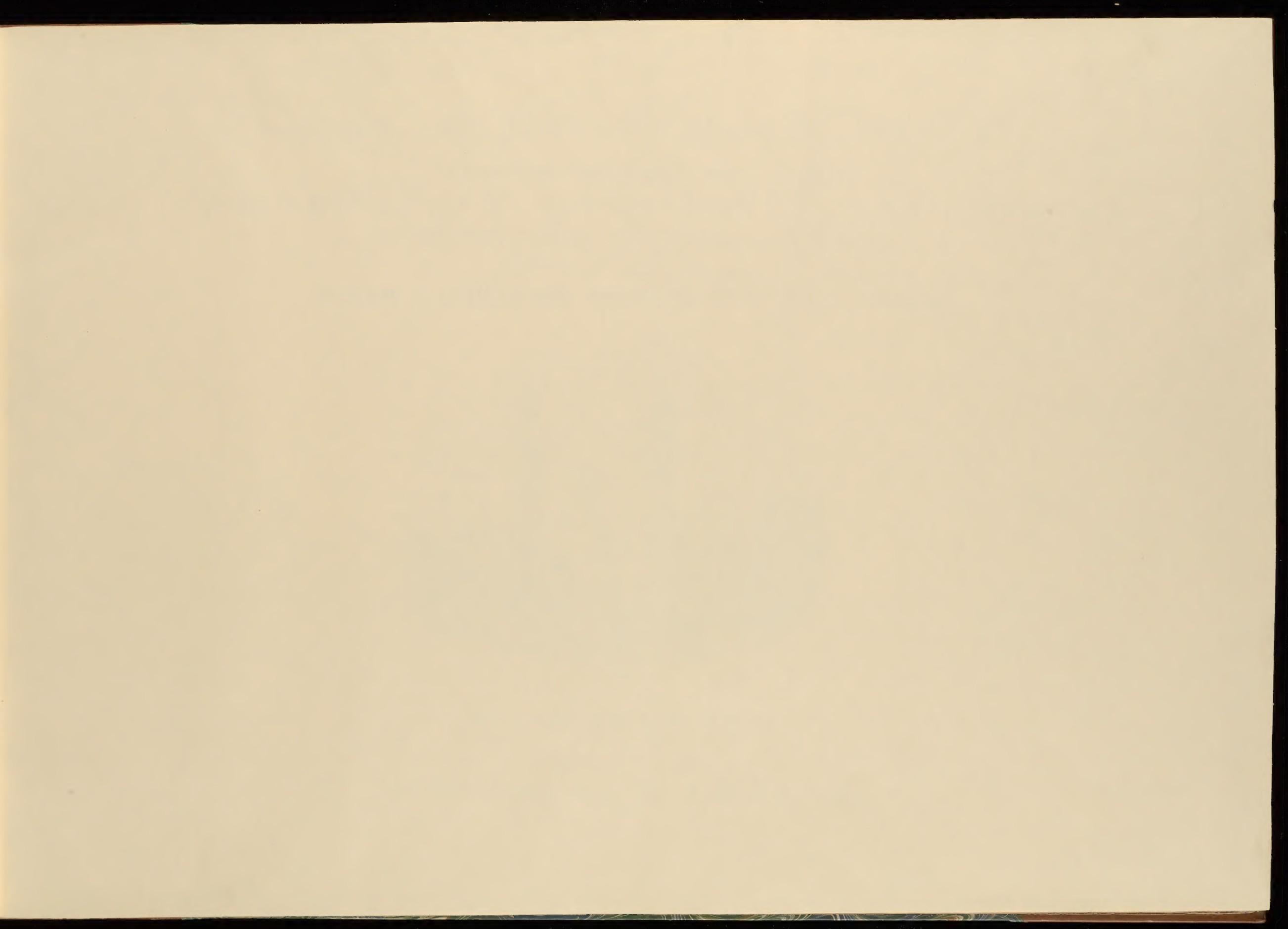
CAPTAIN C. F. HEAD

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3 folding maps, 1 coloured
22 lithograph plates on India paper









George

EASTERN AND EGYPTIAN SCENERY, RUINS, &c.

Accompanied with Descriptive Notes, Maps, and Plans,

ILLUSTRATIVE OF A JOURNEY FROM INDIA TO EUROPE,

FOLLOWED BY AN OUTLINE OF AN OVERLAND ROUTE, STATISTICAL REMARKS, &c.

INTENDED TO SHEW THE ADVANTAGE AND PRACTICABILITY OF

STEAM NAVIGATION FROM ENGLAND TO INDIA.



Major
Approach to the Ruins of Luxor, from the N.E.

BY CAPTAIN C. F. HEAD,

QUEEN'S ROYAL REGIMENT.

PUBLISHED BY SMITH, ELDER, AND CO., CORNHILL, LONDON.

1833.

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PRINTED BY MAURICE AND CO. FENCHURCH STREET.

TO
HER MOST GRACIOUS MAJESTY,
QUEEN ADELAIDE;

THIS WORK,

THE OBJECT OF WHICH IS TO MAINTAIN

THE BRITISH EMPIRE IN THE EAST,

TO EXTEND THE BENEFITS OF COMMERCE,

AND

TO OPEN A READY PATH TO THE MOST CELEBRATED MONUMENTS OF THE

ANCIENT WORLD,

IS, BY PERMISSION,

MOST RESPECTFULLY INSCRIBED

BY HER MAJESTY'S MOST LOYAL

AND MOST FAITHFUL SUBJECT AND SERVANT,

CHARLES FRANCKLIN HEAD.

YUNELAM - GEORGIA AND TURK. 8.211.

ALLEGATOR, ZAMBIA

1000

YEAR BUT YET I DON'T FEEL LIKE IT

THAT'S THE WAY I FEEL

WE'RE GOING TO GET OUT OF THIS PLACE

INTRODUCTION.

A VARIETY of circumstances have combined to retard the appearance of the present work. At the period when the author first entertained the idea of submitting to the public his views on the subjects comprehended in it, he did not anticipate the necessity of entering so minutely into detail, as, on subsequent reflection, he has deemed it requisite to do. The delay occasioned by extending the range of investigation beyond its intended limits, has been the less regretted, as the aspect of the political world, during the last eighteen months, seemed to hold forth little encouragement for introducing subordinate schemes of improvement to the notice of influential persons. Now that the great question which agitated the country is decided—at the moment when the legislature has commenced its deliberations, the object of these pages may aptly claim consideration—recommended by the plea of utility alone, and unassisted by the graces of literary embellishment.

The author has had a double object in view, namely, to promote a rapid communication with India by way of Egypt, through the agency of steam navigation, and, as a natural consequence of this measure, to secure our Indian frontier against the perils of northern invasion. In order to leave no part of the question unilluminated, a journal of the line of route has been given, with sketches of scenery and antiquities—instructions have been supplied for the navigator—calculations for the economist—and statistical and political data for the proficient in military science. From the aggregate mass of information, it is anticipated that the reality and practicability of the presumed improvement will be admitted by all who enter into an examination of its details.

Presuming that the proposed change can be effected, that, instead of a four months' voyage by the Cape of Good Hope, the traveller to the East can accelerate his progress by two months, and that a section of his course will be through Egypt, reasons innumerable suggest themselves in favour of its adoption. As an addition to individual comfort, the propriety of the change is obvious. The voyage up the Mediterranean would have none of the weariness incidental to protracted and unvaried marine confinement. Even if it were absolutely monotonous, still Egypt would afford ample compensation for temporary inconvenience. There, where the deities of the earlier world keep their colossal state in the silence of the Desert—where the mysterious Nile pours forth exhaustless abundance—it would be impossible to sojourn without pleasure, or to depart without instruction. The pen or the pencil may convey an impression of those things for which other lands are remarkable,

but no description or representation, however graphic, can awaken an adequate conception of the power and majesty impressed upon the monuments of Egypt.

It is almost superfluous to expatiate upon the commercial importance of Egypt, or to advert to the manifold benefits that Britain has derived from her ascendancy in Hindoostan. The harbour of Alexandria is thronged with our vessels, and when the Pacha abandons his injudicious manufacturing speculations and monopolies, our trade in that quarter must receive a large and profitable increase. The regular transit of Europeans through the country would promote civilization, and foster those friendly feelings already manifested towards us by the natives. Thus the humanizing influences of polished life might be gradually diffused along the shores of the Arabian Gulf, and into the very heart of Africa, while with their diffusion would arise a higher order of wants that would open new marts for our manufactures, and fresh havens for our commerce.

Not to mention the great advantages that would result merely from the capacity to convey intelligence to and from India in half the time usually occupied in the transmission of despatches, it is clear that a close communication between Egypt and our Oriental territories would tend to consolidate our power and to augment our sources of wealth. The Egyptian ruler is by position a natural ally—an ally whom it would be our interest to support, and from the extension of whose authority we could derive scarcely any injury, but, on the contrary, much good. Should the Ottoman empire, broken and superannuated, be assailed by Russian ambition, sound policy would dictate to England and Egypt the expediency of co-operation against that power. Ours is not a rapacious policy, all that we require is the peaceful intercourse of traffic, and this the whole tenour of Mohammed Ali's counsels assures us we should obtain.

The ports of Jiddah and Mocha in the Red Sea are already the seat of a considerable trade; the former place is the great *entrepôt* between India, Egypt, and Arabia; many of its merchants possess large capitals, secured to them by the rational policy of Mohammed Ali. Owing to the scarcity of timber, the vessels of Jiddah are purchased at Bombay, and occasionally at Muscat, or other Mussulman harbours. Jiddah being resorted to by pilgrims on their way to Mecca, the Mussulmans of Hindoostan would avail themselves of a regular communication between our Eastern possessions and the Arabian Gulf; and thus passengers, as well as Parsee-built ships and Oriental merchandize, would be forwarded at a profit to the chosen land of Islam from the island of Bombay.

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There can hardly be a doubt that the successes of Ibrahim Pacha will wring the cession of Syria from his political superior. Egypt, Arabia, and Syria, fairly reduced to habits of order and regulated industry, would form a noble empire. From the genius that has already achieved so much, every thing may be expected; and even if destiny should not allow the ruler of Egypt, or his son, to complete the work they have carried on so boldly and so far, still there is no ground to fear, that their improvements will perish with them. They have toiled too assiduously to engrave their ideas upon the minds of those around them, to die without successors able and willing to follow in their footsteps. Among the semi-barbarous tribes, whose regeneration these chiefs are endeavouring to accomplish, England will find a ready market for her manufactures, receiving in return for her cottons and hardware, the products with which nature may have blessed the soil.

A cursory glance at the proposed line of route is enough to demonstrate the rapidity with which civilization must necessarily be communicated throughout the intermediate and yet unenlightened sections between England and Bombay. There would gradually be an interchange and intermingling of population—prejudices would, ere long, disappear, and the slumbering energies of some of the finest portions of the world would be re-awakened to restore their inhabitants their lost position among the nations, and to repay the agents in their regeneration by the abundant fruits of peaceful intercourse.

It may seem worse than supererogatory to say one word on the immense accession to her wealth and power derived by Great Britain from keeping the key of the treasury of the East. From the earliest ages, from the times when Oriental gold and spices were borne by the weary and perilous track of the caravan, till now, when the majestic Indianman arrives laden with tribute to our merchant princes, the possession of that key seems to have been equivalent to holding a talisman of commercial prosperity. Under the British government and its allies, there is a subject population of at least 100,000,000 in Hindooostan. Our standing army in 1826, exceeded 300,000 men; the territorial revenues of the Company amounted, during the year 1827-28, to about twenty-three millions. In the year 1828

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the value of the exports to India, by private trade, bordered on four millions; and were the articles of East India produce placed on an equal footing with those of our West India Colonies, there is no doubt that this trade would speedily extend. These insulated points of statement will afford a general idea of the importance of the magnificent dominions which the writer of these pages is most solicitous to see *brought nearer* to Great Britain: but no returns, however ample, would fully set forth the multitudinous modes in which this island has been benefited by the connexion, unless they included a list of the thousands who, having quitted our shores pennyless youths, with all their hopes and expectations fixed upon the future, have returned bearing the characteristic title of "Nabob," to beautify the scenes of their early life with palatial residences, and to stir the lagging spirit of native industry by the effective stimulus of capital. If we succeed in abridging the time and distance between England and India by a half of its present extent, it would cause our domestic influences to act upon her with a force double of that with which they operate at present. Even the speedy transmission of intelligence is a consideration of no mean moment both for purposes of policy and trade; not to touch at all upon the plea of individual accommodation.

In the whole plan there is nothing theoretical, nothing hazardous, nothing that can compromise those amicable relations with other states, which, as the first trading nation in existence, it is our manifest interest to sustain and cherish.

For the details furnished in this unambitious publication, no further merit is claimed than their good faith, and their total freedom from any leaven of alloy supplied from doubtful or sinister sources. The writer has had no object to serve—no end to aim at—save the sincere desire to promote the welfare of the country in whose service it was his lot to visit the lands, an acquaintance with which suggested to him his present theme. If he should succeed in making himself understood, all his literary aspirations will be gratified; if he should prove instrumental to the adoption of the changes he has recommended, he will congratulate himself on having, however rashly, entered on a field foreign to the discipline to which he has been accustomed.





VIEW OF BOMBAY HARBOUR

Taken from the Island of Colaba



BOMBAY HARBOUR.

It was with the feelings natural to one who bids adieu to a peaceful residence among kind friends for the purpose of encountering strange faces in an untried land, that I quitted Bombay, on the 6th of October, 1829. Government despatches formed my passport. I was to be accommodated with a passage halfway up the Red Sea, in a cruiser of the Honorable Company's, which had been commissioned to survey the south of the Gulf. For the remainder of the journey, I was to depend upon such resources as circumstances might place before me. After leaving the cruiser, I saw no prospect of having any companion except an interpreter, whom I hoped to find at Mocha. Persons of this class are seldom to be procured in India, and for their services, when attainable, they demand an exorbitant recompense.

Anxious that others should have the benefit of my experience, I would recommend to all who may take the same route to provide themselves at Bombay with the requisite supply of comforts and conveniences for the whole journey, of course regulating their stock by their peculiar mode of voyaging, whether by country vessels or otherwise.

The *Benares*, in which I sailed from Bombay Harbour, in common with the rest of the Company's cruisers, was officered by Europeans, and chiefly manned by natives. Regular discipline was maintained on board, and there was none of that confusion and strife of tongues which form the disagreeable characteristic of vessels under the control of Asiatics.

As we glided with a light north-west wind past the Island of Colabah, the aspect of the receding coast wore the outline of the accompanying sketch. How differently do the features of the Indian landscape affect the minds of those who give them a first salutation, or a last adieu! To the former, they seem the confines of a land of promise, on which the imagination delights to revel, amidst visions of Eastern pomp and luxury. To the latter, they appear melancholy remembrancers of dissipated dreams—of long years of weary exile—of friends gone to the silent tomb—perhaps of ruined hopes, and health irretrievably broken. Varied are the destinies of the adventurous Britons who point their youthful course to Hindostan.

"There are who stay to raise thy solid fame,
O Albion! and perpetuate thy name;
Whose souls despise the tempting lure of spoil,
And seek but glory in the path of toil:
Yet many linger on the torrid shore
For wealth, till wealth can comfort life no more."

But to return to the Harbour of Bombay. Not far behind the spot from which the view is taken is a light-house, situated near the extremity of the Island of Colabah, which marks the western

entrance to the harbour. In the same direction is a cantonment for an European regiment, and singular enough, it is at present occupied by the "Queen's Royals." I say singular, because Bombay was ceded to England as part of the dowry of the Infanta of Portugal, who wedded Charles II., and it was this very regiment that escorted the Princess to England, and received from her its honorable appellation, with a flag bearing on it the date 1666. At the base of the view a knot of *hamdls* (porters), with a palanquin, are in waiting for their master, whose *bungalow* (country house) is partly visible.

In the Indian cantonments the walls of the houses are constructed of brick dried in the sun. These are covered with roofs of straw or grass, secured at the angles by matting; the whole being made firm by a frame-work of wood. Blinds, or jalousies, open on verandahs that extend the full length of the dwelling, and are useful for imparting coolness and shade to the rooms, and for affording the means of limited exercise to the inmates. A hedge of the prickly pear, the common fence of India, encloses the compound or grounds.

About half a mile from the point of view, and adjoining the arsenal, is a group of *bungalows* shaded by palm-trees, concealing a causeway which unites the Islands of Colabah and Bombay. On crossing this causeway, you arrive at the Castle, or Presidency. Numerous vessels are anchored off the town; and beyond those that lie seaward, little boats are seen proceeding up Salsette river, which separates the islands from the continent. The time is sunrise, and the reddening rays distinctly develope the bold outlines of the steep and rugged hills or *ghauts*, which, with their fortified peaks, form such striking objects in the scenery of the Concan. The triangular-shaped hill, broken in its outline by trees and jungles, is the Island of Elephanta, famed for its excavations. On its right are boats bound for Panwell, a town about twenty-four miles from Bombay, the landing place of persons journeying to the Deccan, or towards Calcutta or Madras. The houses in the fort are in a great measure hidden by the lofty battlements of defences which have rendered Bombay a magazine for public and private records. Without the town are crowded and noisy bazaars, calculated to interest and amuse the stranger; while, beyond these marts of petty speculation, embowered among palm trees, are many pretty villas, the habitations of our countrymen, "who, as soldiers, waste their joyless years in that remote land, with the consciousness, indeed, of being useful, but with little glory;—as civilians, in severe, honorable, and important duties;—as ministers of the gospel, in labours high and holy;—always anxious, ever slowly fruitful, and oftentimes altogether disappointing."

The Island of Bombay is about ten miles in length by three in breadth. In 1816, it contained 20,786 houses, which, allowing about eight persons to each house, gives a population exceeding 160,000 souls. There is, besides, an annual floating population of between sixty and seventy thousand persons. The greater part of the Island is held by the Parsees, the descendants of the Persian fire-worshippers,

BOMBAY.

who were expelled by the Mohamedans. They are a respectable class, and are distinguished as the best ship-builders in India; they entirely monopolize the docks of Bombay, and their vessels are considered one-third more durable than any other ships of Indian construction. The markets here, though inferior to those of Calcutta, excel those of Madras both in the quality and variety of the articles for sale.

Between the Presidency and Salsette the soil is barren, and little improved by cultivation. On the eastern side of Salsette are many remains of Pagan temples. On the opposite continent, at Bassein, are ruins of Catholic churches, the melancholy relics of Lusitanian sway. An inscription on a monumental stone reminds us of their origin, in simple, but expressive, language,—“*Donna Maria de Souza, 1606.*” This touching record of affection still endures long after the fruits of De Gama’s enterprize have been plucked from the hands of his countrymen. European supremacy in India has written its achievements upon sand; and, perhaps, even we ourselves, ere the lapse of many years, may be forgotten on its shores; for

“Out upon Time! he will leave no more
Of the things that are now, than of things before.”

The Island of Salsette abounds in mythological antiquities. The excavated caverns on the eastern side are distinguished by spirited carving and colossal statues. Two gigantic figures of Buddha, nearly twenty feet high, remain in a state of complete preservation, which they owe to the zeal of the Portuguese, who painted them red, and converted the place they ornamented into a Catholic church. The length of Salsette may be estimated at eighteen, and the breadth at thirteen miles. Its soil is well adapted for the cultivation of sugar, cotton, hemp, flax, and indigo.

Elephanta, which is about seven miles from the Castle of Bombay, is formed of two long hills, divided by a narrow valley. It is about six miles in circumference. The Portuguese gave the island its European name, from the figure of an elephant cut out of the black rock, which stood on the acclivity of one of the hills to the right of the landing place. The neck and head of the elephant dropped off, in 1814, and the body threatens soon to follow. The great temple of Elephanta, which is hewn from the living rock, is about 130 feet in extreme length, and 123 in breadth, and varies in height from 15 feet to 17½. It was supported by twenty-six pillars and sixteen pilasters; but nearly one-third of the former have been dismembered by the accumulation of water in the cavern, owing to the annual rains. In the centre is a gigantic Trimurti, or three-formed god,—Brahma, Vishnu, and Siva; the faces of the deities are five feet long. There are also a number of carved figures in high relief, of other Hindoo deities, (among them Brahma sitting on a lotus,) besides a multitude of mutilated mythological decorations, which have fallen a sacrifice to mischievous curiosity and devotional hostility. The great

BOMBAY.

temple is half way up the mountain, and fronts the east. It is not now held in repute as a resort of worshippers. The period when it was constructed is entirely unknown; but from the rapid decay of the rock produced by the weather during late years, it is conjectured that it cannot be of very remote antiquity.

As much of our path will lie among sacerdotal monuments of the olden time, I may here observe, that however wonderful are the excavations of Elephanta, they are far surpassed, both in magnitude and in delicacy of execution, by similar works at Elora. The “wonders of Elora” consist of a series of temples, extending along the side of a rocky mountain, on approaching which upwards of a dozen are distinguishable. Three caves, similar to that of Elephanta, rise, one above the other, communicating by steps, and impressing the mind with a sense of superhuman grandeur. The following are the dimensions of the grand temple and the cave Cailas, which are parts of the same excavation.

DIMENSIONS OF CAILAS.

		FEET.
Height of the gateway	- - - - -	14
Passage of the gateway, having on each side rooms	15 feet by 9	42
Inner court—length of the gateway to the opposite scarp	- - - - -	247
Ditto ditto breadth	- - - - -	150
Greatest altitude of the rock out of which the court is excavated	- - - - -	100

DIMENSIONS OF THE GRAND TEMPLE.

Door of the portico, 12 feet high by 6 feet broad, length from the door of the portico entering the temple to the back wall of the temple	{	103
Length from the same place to the end of the raised platform behind the temple	{	142
Extreme breadth of the inner part of the temple	- - - - -	61
Height of the ceiling	- - - - -	18

The pillars are finished with an endless diversity of embellishment, as if a multitude of artists had been employed in endeavouring to rival each other in the most elaborate display of ingenuity and skill. The Brahmins on the spot assert that these caves were formed nearly eight thousand years ago, but what their real age may be we have no precise means of ascertaining. Unlike the temples of Egypt, no vestige of any kind of writing is traceable upon the rocks of Elora. With respect to the religious application of the Indian temples, the figures they contain shew that those of Salsette appertain to the Buddhists, that of Elephanta to the Brahmins, and those of Elora to both.



VILLAGE & BAY OF TAMARA.

Island of Socatra Taken from the North



THE ISLAND OF SOCATRA.

HAVING rounded the southern point of Colabah, we steered about west-south-west; and with light winds from the north, broken by occasional calms, we sailed at an average rate of eighty miles a day, until, on the 18th, we came in sight of the Island of Socatra. The breezes became lighter as we approached the island, the bold and picturesque scenery of which we had full opportunity of observing as we coasted by its northern side to gain the anchoring-place. During the voyage, the thermometer rose to 81°, when the sun reached the meridian, and fell during the night to 78°, making a delightful temperature in the refreshing shade of the awnings, with which all vessels in these latitudes are provided.

On the 20th, we anchored in Tamara Bay, at three-quarters of a mile from the shore. A small village on the coast, lying nearly in a line with Chimney Hill, the highest peak of the mountain, gives its name to the bay, which is about thirty miles from the east point of the island. The village is inhabited by upwards of two hundred Arab families. Its insulated mosques, and ruins, and extensive burial-grounds, afford indications of former populousness and prosperity.

Socatra, the Dioscorides of the ancients, is the nearest land to India in the direction of the Red Sea. On reference to the map, it will be seen that it was almost in the line of the ship's course. Its soil produces tamarind and date trees; of the latter, an abundance: but the bounty of Nature is lost upon the barbarous inhabitants, who seem utterly insensible of the benefits to be derived from industry.

Chimney Hill, on the peak seen in a line with the village, is the highest part of the Island, and rises upwards of 3000 feet above the level of the sea. The mountain is completely crested with rocks resembling spires, the dark shadows of which, contrasted with the lustre of their opposite sides sparkling in the sun, produce a brilliant effect. Irregular masses of rock, seemingly detached from the summit of the mountain, are seen midway, forming a rude heap on its side. Vultures hover over the highest peak, as if triumphing in the security of their inaccessible abode. Not a shrub, or blade of grass, relieves the savage nakedness of the numerous rocky pinnacles. Some indigenous plants are found towards the base of the mountain, and among them the aloe, for which this island was always famous. There is a fine stream of fresh water near the village: light falls of rain are unknown; when the clouds discharge their stores, the descent is in torrents. According to Arrian, Socatra, in the second century of the Christian era, was inhabited by Arabs, Greeks, and Hindoos, who had long been established there for the purposes of trade.

This Island, like other countries that fell under the iron rule of Mohamedanism, was deprived of the advantages of unrestricted social intercourse, and was for many centuries almost forgotten. During this period of darkness, it sank into a state of utter neglect and insignificance, in which it re-

mained until an European nation entered the Eastern Seas. It was found, by the Portuguese, shorn of its ancient name, and of every trace of its former civilization. Vincent Sodrez was the first of that people who visited Socatra. The Island was afterwards attacked by an armament under Tristan D'Acunha, with a view to occupy it, and thereby check the advance of an enemy from the Red Sea. The garrison, with their chief, after making a desperate resistance, were all put to the edge of the sword; but the captors soon perceived that their conquest was not worth retaining. Eastern trade had passed to the continent, and in the time of Marco Paolo the vessels which came from India were unladen at the port of Aden. Socatra is admirably adapted to form, like St. Helena, a strong and useful resting-place for ships in their progress between the eastern and western markets, and on this ground merits to be made the seat of an English colony. Already a trade is maintained between this island and the continents adjacent; and, should it again become the scene of active commercial resort, it will afford an eligible mart for the exchange of our manufactures for the ivory and gold dust of Africa and the spices of Arabia.

Socatra is about eighty miles long by twenty broad, and contains several harbours. It is under the nominal sovereignty of the Imaum of Muskat, who, by means of a naval force, consisting of a single frigate, maintains supremacy over the maritime towns in these seas. The present inhabitants are of the wildest description of Mohamedans. All of them are armed with matchlock, sword, or target; and those who can procure nothing more effective carry spears. They live amongst ruins, in low square buildings, separated from each other by high walls. They appear to have had but little intercourse with Europeans, but were sensible of the advantages of trade, offering every article they had to spare, which they conceived likely to prove acceptable. They brought dragon's blood, some fowls and fish, and begged for rice in exchange, in preference to money.

The sheik, or governor, whose mean appearance corresponded with the poverty of his vassals, came on board to welcome our arrival. He was rowed in a rude canoe by a single attendant. They had no hesitation in mounting the side of the vessel, and both walked the deck of a man of war with savage *nonchalance*. Whilst the sheik was standing in the midst of scrutinizing strangers, his gaze became fixed upon the sun, at that moment sinking below the horizon. As the ruddy orb dropped out of sight, he turned towards Mecca, and began his evening devotions; and with the utmost regardlessness of all around him, he continued his orisons for ten or twelve minutes.

ADEN.

We sailed from Socatra on the 22nd of October, and pursued our course towards the west. The winds were southerly, and we made about one hundred miles each day. In five days we came

within sight of the Coast of Arabia, and on the 29th anchored in the Bay of Aden. A village, comprising a couple of hundred wretched habitations of Arabs, situated at the head of the Bay, amidst heaps of rubbish and ruins, indicates the fallen fortunes of the place you are approaching. Another cluster of huts, inhabited by two or three hundred Jewish families, is seen at a little distance from the Arabian dwellings; and a few houses of two stories, occupied by Banyans, or Indian merchants, shew that Aden is a place which, even in decay, possesses some commercial attractions.

On a nearer approach, battlements of well-cut masonry, with arched sally-ports, are observed lining the shore, while watch-towers crown the summits of a high range of mountains that begins at the south end of the continent, and runs inland from beyond the town. Accumulated sand offers an easy ascent to the ramparts, on which I saw three brass guns 18 or 20 feet in length. I was informed that several others were buried in the sand. These remains attest the glory and enterprise of Albuquerque, and shew the prosperous state of Portugal when in possession of Eastern commerce.

Every thing that meets the eye of the traveller at Aden is calculated to awaken sad reflection on the vicissitudes of nations. Its present desolation is mournfully contrasted with the records of that prosperity which prevailed on the shores of Arabia the Happy, before Greece had attained her arts or Rome her power. Yet, altered as it is, Nature has not withdrawn her favour from the soil. The trees still shed their "medicinal gum;" the luscious date still furnishes a ready repast; and the coffee-plant produces a superior article of luxury, to enliven the sober Moslem, and cheer the social circles of Christian Europe.

Aden affords facilities for the establishment of an advantageous market. Good water may be obtained, and fine sheep, brought from Africa, may be purchased at between three and four shillings a piece. There is an air of extreme primitiveness around the place and its people. The sheik, a modest and civil young man, had the sides of his apartments decorated with such humble ornaments as glass bottles and cups; and the mixture of rude tribes that formed the population of the town was such as might be presumed to have been congregated on the same spot a thousand years ago.

I wandered about the town in company with some Arabs, who took their leave on approaching the Jewish quarter. One of the Arabs described the residents in this district as a "poor people;" and his remark derived additional force from his own squalid appearance, which might well draw forth the sympathy of the European traveller.

Advancing towards the ruinous habitations of the Jews, I heard a loud burst of voices, which, on proceeding nearer, I found to be produced by twenty or thirty boys, engaged in singing the Psalms of David. Many copies of the Old Testament were in their possession. I was conducted to the Synagogue, the mean appearance of which shewed the poverty of the worshippers. These outcasts

S T R A I T S O F B A B - E L - M A N D E L.

of Israel have lost none of those peculiarities of feature which distinguish them from all the nations among which they seek subsistence and a home.

On our return to the boat, a motley assembly were collected for the purpose of expressing their kind feelings, and at the same time satisfying their curiosity. None of the party was more conspicuous than the stately Abyssinian, with spear in hand. Amply clad about the waist, the remainder of his upright form was proudly exhibited, his white teeth vying with the finest ivory, and contrasting singularly with the jet black skin. The most striking point in the appearance of these men, was a head-dress of white hair, frizzled out to the size of a judge's wig. This extraordinary and laughable effect is produced by a constant application of lime plastered over the head, till the black hair is turned, first, to a reddish hue, and afterwards to white. The wig is decorated with wooden combs of a yellow colour, and no dandy in modern Europe can surpass these African fops in the pains they take to render themselves ridiculous.

In the morning of the 30th, the Islands that lie in the outlet from the Red Sea were before us; the distant hills on the African Coast were seen on our left, and had a flatter appearance than the mountains of Arabia. We passed through the Straits of Bab-el-Mandel, the wind, as it always does, increasing in strength at the entrance of the Straits. Being the N. E. monsoon, it blew directly towards the Red Sea.

The ship was rounded to the east, and, soon after passing the Islands, anchored in a fine bay. A few Arab boats were seen stealing along the beach, and two of them anchored within hail of us. I went on shore and found this part of the coast distinguished by all the sterility of Aden, unaccompanied by the appearance of a single habitation. A large salt marsh, with an incrusted surface, was partly covered by the advancing tide, and the solitude of the spot was only broken by the wild screams of flocks of sea birds.

In a short time a few fishermen appeared, and excited surprise at their existing amidst such a scene of desolation. Having crossed a wide belt of sand and coral, I was led on by the expectation of getting a shot at some antelopes which I saw at the bottom of a chain of hills. The chase took me through a deep chasm, into the centre of a wild and dreary mountain, where all was still. I looked in vain for water, or the appearance of herbage. It is marvellous how the Bedouin contrives to glean a subsistence on such a spot. But freedom is dear to the sons of the Desert; and they prefer a life of vicissitude and toil on the sandy plain, to a residence in the civic prisons, where Eastern despots capriciously trample on the dearest rights of man.

The breeze lessened as the sun went down, but there was enough of wind to waft us, on the 1st of November, in seven hours, to the anchorage in the open roadstead at Mocha, about two miles from the shore.



VIEW OF MOULIA

VIEW OF MOULIA.

Taken from the North.



M O C H A.

A CLEAR idea of the appearance of Mocha from the sea will be conveyed by the view of Jiddah in the next plate, and the same will hold good of Hodeida, Camfoodah, and Yamboo, which are the other walled towns on this coast.

Each has been well described as resembling, at a distance, a town of white marble. The square form of the houses is relieved by ornamented minarets, surmounted by the crescent. There is, at this place, one mosque to five thousand Mohamedans; and, according to the amount of population, the same proportion will be found to prevail in all the towns on the borders of the Red Sea.

Behind the town, and separated from the sea by a belt of sand, is a back ground of mountains running north and south, with rugged tops, "barren and bare, unsightly, unadorned." These are the continuance of a mountain range which extends from the very extremity of the Red Sea to the southern part of Arabia. Coral and sand-banks prevent large vessels from approaching near the shore, without great difficulty; whilst the strong winds that always blow in this quarter, by rendering the passage to and from the town arduous, if not dangerous, deprive Mocha of the advantages it might otherwise enjoy, as a halting-place for shipping. Many large dows or buggalows, (country vessels,) with freights from India, were anchored off the town. Djerm—barks of a smaller description—were still more numerous; and in these the trade is carried on with the ports higher up the Red Sea.

A loop-holed wall, flanked by towers, rises from the water, and extends the whole length of the town. The defences wear a formidable appearance at a distance, but sink very much in estimation on a close inspection. They are rudely built, and ready to fall on a first discharge of the few cannon on the battlements. There is a good landing-place, formed by a projecting pier.

On the arrival of a stranger, numerous wild figures give him greeting, and offer their services in broken European languages. If the traveller be an Englishman, he will find a most attentive and kind friend in Sheik Tyebe, a native of India, who is agent to the Honourable East India Company. Under his escort we passed the Arab guard, stationed at the entrance from the pier; some of whom were smoking, or regaling with coffee; but the greater part were sleeping. Their dark green dress and rude fire-arms created a feeling more akin to wonder than awe. Benches are erected in front of all public places, to accommodate the lazy habits of the Orientals. We observed a few Turks, who were easily distinguished from the Arabs, by their greater bulk and more abundant trappings. They cast a significant and haughty look on the passing Giaours. The illiberal feeling of the disciples of the Koran gradually disappears as they come more in contact with other nations; but at this place, about ten years since, their intolerance was carried so far, and such repeated insults were offered to British subjects, that a frigate, and a few of the Company's cruisers, were sent from Bombay to demolish one

of the forts. This having been accomplished, and a few shells thrown into the town, an apology was given, and civil treatment has been the result. But the evil spirit of bigotry cannot be easily expelled, and a blood-red flag still waves above their battlements, and exhibits the device of a decapitated Christian.

On entering the narrow streets of the town, the houses are found to be high, some built of coral rock; others, of brick, baked in the sun, plastered and white-washed. Their sides are studded with loop-holes and projecting windows irregularly disposed. The latter have jalousies and fanciful fret-work ornaments; and the spaces within being carpetted, form lounging places for the inmates. On the summits of the flat roofs are battlements, with doors leading to the upper apartments, a portion of the premises held sacred to female use.

The population of the town gather about the coffee-shops, and at all hours ply the hookah and the pipe, on seats beneath spreading awnings.

The most amusing scene that offers is the Bazaar, which may be called the very heart of an Eastern town. There the traveller one moment passes the noisy artisan; he is next attracted by the seller of dates; then comes the vender of roast meat swimming in gravy, and of ready-baked pan-cakes. There are many shops for coffee, vegetables, and corn; stands for bread, sweet-meats, and perfumes are also conspicuous. Tailors, barbers, sandal-makers, and money-dealers, form part of the motley group. Here and there are armourers' shops, with specimens of workmanship, and several stores of wearing apparel, arranged with much art to catch the eye. The whole is intermixed with coffee-shops, and *okellas*, or court-yards; the former for the lounging townsman, the latter for the busy merchant and passing traveller.

All these occupations, and a few more crowded in narrow streets, covered with canvas awnings, form what is called in the East a Bazaar. The fronts of the shops are secured by wood-work, like the large shutters that are seen in London, but there is neither glass nor door. The window is the shop, and the shopman sits on a floor, level with the passers by, who, turning aside, reach the various articles for sale. I could see nothing of British manufacture, but some crockery ware.

It would be difficult to describe the groups that are seen to pass when the observer retires for a few moments to a coffee-shop. He is amused by the ample, though shabby, robes of a lusty Turk, forming a contrast to the dark-coloured and scanty costume of the keen-eyed searching Bedouin,—parties who exchange looks as hostile as their habits. Next comes an erect African, whose features and complexion denote him to be of Abyssinia. He is followed by a short, stout-limbed native of Sennaar. Hindoo Banyans, or merchants from India, in loose attire, enliven the group. Jews are also seen, with stealthy step, evading observation. All these races may be easily distinguished from

M O C H A.

the Arabs of the towns, and also from each other. Amongst the crowds that frequent the Bazaar, the eye may search in vain for a portion of the other sex. If a female be seen, she is robed in garments covered by a cloak that totally conceals her form, whilst her face is secured by a silk handkerchief. Her feet are clogged by large, loose boots; she appears to stagger from being thus encumbered, and seems an object of pity to Europeans, whose opinions on this subject are ridiculed by the demi-savages, by whose iron customs woman has been degraded.

As the stranger continues to advance through the crowd that fills the Bazaar, the confusion he encounters is heightened by the passing of camels, fastened to each other, and burthened with loads that almost sweep the sides of the streets. At another time a prancing horse, or galloping mule, creates a commotion that renders a man's vigilance essential to his safety.

Every one is armed; and it is more curious than agreeable to see the loaded pistol and pointed spear ready for use in the hands of fiery fanatics, in case of imaginary insult.

Issuing from the gate of Mocha, the traveller enters on a parched plain, that extends to the foot of the mountains. A few wells of brackish water at different parts of the waste irrigate some date-trees. Good water is brought from a distance, and is here an article of traffic, as it is all along the coast of the Red Sea.

Without the walls are three separate villages, one occupied by Abyssinians, one by Jews, and the third by labouring Arabs. The last occupy the kind of habitations seen in the foreground of the illustrative plate. Looking back on the town, the walls, as when seen from the water, wear a formidable aspect. The white houses piled over each other, with the numerous apartments for females on their roofs, make a gay appearance, which is heightened by signal-posts and look-out houses, used by the merchants. The exterior dwellings are of a conical shape; some have upright walls with a rounded top, others have the sides inclining gradually from the base to a point. They look prettily at a little distance: in such abodes, Bedouins, who come to market, for the most part, reside.

On our right we see the English burial ground, walled, and secured by a gate. Few of our countrymen have been interred there. It remains, undisturbed, an act of extraordinary forbearance on the part of Mohamedans, and the more deserving of notice, as a respectable Moslem tomb stands beside it.

On our left are a few date-trees, which, from the unfavourable nature of the soil, do not constitute a good specimen of this rich production of Eastern countries.

Mocha is the principal port of Arabia called the Happy. It is under the chief of Saanna, a place about 150 miles inland, situated among the mountains. From the grapes, tobacco, and various other productions, forwarded from Saanna to Mocha, the two countries must exhibit, in all respects, a very striking contrast. Although the coffee country is higher up than Mocha, large quantities are shipped from that port for foreign markets, and there is made the great interchange of Eastern and European manufactures for the produce of Arabia. From Mocha, a fresh trade is opened with the

C A M A R A N.

ports higher up the Red Sea; by which arrangement, the tribes of the interior, already impoverished and sinking under difficulties, have the additional expense attendant on a double voyage. All this might be removed by the establishment of a dépôt for commerce at a convenient harbour.

In the evening of the 6th of November, we left our station opposite Mocha, and stood up the sea. During the time we lay off this place, the south-east wind at mid-day had freshened, so as to make the passage to and from the town very inconvenient. Its strength always declined towards sun-set, and during the night there was comparative calm.

The morning after our departure, the ship arrived and anchored off Hodeidah, a town walled and built like Mocha and Jiddah. It possesses considerable trade; the inhabitants were civil, and shewed no distrust of foreigners. Early on the morning of the 8th we again continued our course. About this latitude the wind abates that blows with such violence through the Straights of Bab-el-Mandel.

ISLAND OF CAMARAN.

Soon after mid-day we reached the Island of Camaran, in the territory of the chief of Saanna. It lies fifteen or twenty miles off the main land, and has a harbour to the north, with good anchorage for vessels of any size within a few yards of the shore. There can be little doubt, that this port, which, like Socatra, offers a desirable resting-place for steam-vessels sailing between Egypt and Bombay, would become a considerable mart for the trade of Sennaar and Abyssinia, countries that at present can only obtain linen, muslins, and other articles, by sending caravans hundreds of miles across the dreary deserts to the markets of Egypt. From the expense incidental to this mode of traffic, the ventures of ivory, feathers, gums, and other African productions, require to be augmented by the sale of some thousands of human beings, to balance the account for the requisite returns.

The town contains about 100 families, and is situated on the side of the basin or harbour. It has a Bazaar, tolerably well supplied, and, at a distance of half a mile, a few stunted date-trees mark the site of some wells, where fresh water is procured at a depth of twenty feet. A rude fort, that would be strong, if not assailed by cannon, protects this bustling little place. Several small vessels, in progress to construction, shewed the inclination to commerce and industry that prevailed among the inhabitants.

At the fort there was a guard of Arabs, who were unwilling to permit us to inspect it. The sharp, penetrating eye, weather-beaten face, and active figure of these Bedouins, are becomingly set off by a dark dress of green, sombre as the Desert.

The Island of Camaran is formed of one rock of coral, which appears to have grown perpendicularly till it attained the height of twenty feet above the level of the sea. Its surface is without the slightest inequality: After leaving it behind, we, in a few hours, gained the opposite coast, and arrived at the town of Loheia.



MOSQUE AT ADIBECK.



LOHEIA.

7

BANKS of sand and coral render the navigation at this point very difficult. The coast is marked by a broad belt of desolation, similar to that which divides Mocha from the mountains.

Loheia, not being a fortified town, affords a true specimen of an Arab settlement. It is surrounded by Bedouins, and frequently attacked by them. The Bazaar and cattle markets are enclosed within a well-built wall, flanked by towers. The town is protected by a fort, and as at Camaran, jealousy of our approaching it was exhibited.

On landing, the inhabitants were agitated, appearing as if they had seldom held intercourse with Europeans. Soldiers, armed with matchlocks, began to assemble with the matches burning. A visit to the Sheik led to an exchange of civilities, and the treaty of amity was established with all due formality on our proceeding to handle each others' weapons. We were afterwards allowed to roam about at pleasure. Outside the Bazaar there were regular streets, with houses shaped as represented in the plate. They are formed of a slight bamboo frame, thatched with hay, which, to obviate the injuries of heat and wind, is covered with numerous ropes made of the same material. Each family has a distinct enclosure, containing houses or huts, of a square or circular form, in which they live secluded from their neighbours. All intercourse amongst the men is held outside. They recline on a rude couch, or a broad bench, occasionally placed under a verandah.

The mosque, like every thing seen at Loheia, is in a neglected state. The pillars stand in a double row, united to each other and to the wall by pointed arches, every four of which support a dome; they are plastered and whitewashed on the exterior. The domes correspond in number and size to the importance, as does the minaret, or steeple, to the extent, of the mosque. From the top of the minaret the Mueddin calls the true believers to prayer, by the usual announcement:—"There is no God but God, and Mohamed is the prophet of God, &c." To direct the people in their devotions, a *mahrab*, or niche, is made in a part of the mosque, indicating the *kiblah*, or exact bearing of Mecca. Towards this point the congregation turn to pray. Near the niche there is a pulpit, or place from which the Imâm delivers his discourse.

Ruined buildings, and other indications of the past, shew that Loheia has declined in importance. It still carries on a considerable trade with Mocha and Jiddah, exporting to the former town coffee-beans, dates, and honey-comb, brought from the interior, and exchanged for articles of dress, utensils, drugs, &c. All these branches of traffic would be readily transferred to Camaran.

Water is conveyed to Loheia from a distance, in small jars, carried in a frame as depicted in the plate. The universal sterility that exists on this coast, where no stream is known to reach the sea, and the wildness of the roving tribes, cause us to wonder how produce, that requires care

and cultivation, can be obtained from such unpromising sources. Our curiosity is satisfied by information obtained from Burkhardt, who says, that "about these mountains there is abundance of water rising from springs and rivulets, which causes them to be well cultivated, and more closely inhabited than any other part of Arabia." The Arabs are divided into tribes, each able to furnish six or eight thousand fighting men. They practise the forms and rites of their ancestors, and are noted for hospitality. From these mountains, they descend to the coast, for the purpose of traffic. There is no difficulty in distinguishing the Bedouin, or Wandering Arab, from his brother of the town. The former, although in rags, displays an air of superior independence, and seems to own no master, but to be equally indifferent to authority as to riches.

The walled Bazaar, with its towers and gates, indicate the opinion entertained of the honesty of the neighbouring tribes. Among the residents of the place are several Hindoo merchants. Coffee is shipped from hence to Mocha for the foreign supply, and there is a considerable trade in mineral salt, which is quarried in the neighbourhood. At the time of my visit, a great part of the inhabitants had fled with their property to the Island of Camaran, in consequence of some marauding incursion of the Bedouins. The government appeared to have little weight or stability, and an attack from the troops of the Pacha of Egypt was expected. There can be no doubt that this ruler could easily subdue the whole coast of Arabia, the troops of the country having no tactics nor organization.

The extensive burial-places, with mosques and ruins seen around the town, are memorials of the time when Europe was supplied with coffee through Egypt, and Loheia was the port of shipment to the latter. The annual export of coffee then amounted to 16,000 bales, of 305 lbs. each. European vessels now go round to the Red Sea for this article; and Mocha has become the mart for a trade that more properly belongs to Loheia, from its vicinity to the mountains where the coffee grows. This branch of traffic would be at once transported to Camaran, if sales could be effected there, for the wretched state of native seamanship in the Red Sea makes any addition to a voyage a matter both of personal and pecuniary importance.

At Mocha, the Imâm exacts a fourth part of the coffee before it can be exported. At Jiddah, Europeans are only required to pay an import duty of 8 per cent., other nations 13 per cent. Under such thralldom the Arabs are forced to remain. Some independent tribes made repeated offers to Europeans of exclusive commercial privileges, if a mart were established at Loheia, provided they were supplied with arms in return, without which they are unable to throw off the yoke that oppresses them.

Loheia is at the margin of the sandy waste which separates the sea from the chain of mountains,

Water is brought from the interior, and no advantage, save that of trade, is held out to a settler in this dreary spot. The plain produces a few saline and succulent plants, that tend to relieve the thirst of the cattle, and afford some little relief to the eye of the weary wanderer. Though showers are a rare phenomenon in these lower regions, they are frequent in the adjoining mountains, and there the vine vies in richness with the fig. There are other fruits, and various kinds of grain scattered amidst rocks, watered by rivulets; but the boast of Arabia is her coffee, which possesses the most valued qualities, and owns a flavour superior to any derived from the different soils to which it has been transplanted. Beyond the hills are the extensive plains called the Nedjez, noted for a fine breed of camels and of asses. But, of the animal tribes, the horse is the pride of the country, and as such is known throughout the world. The breed of Solomon is said to have been preserved in purity of blood through a course of 2000 years.

On the 10th we sailed from Loheia, and skirted past several islands and shoals. The winds were now variable and light. The following day we reached Ghesan, where there are between two and three hundred houses crowded together and protected by a fort. There was likewise a Bazaar, but altogether the place is much inferior to Loheia. The natives informed us, that this was the second time they had seen an European vessel. Ghesan is the first place under the Pacha of Egypt, that is touched at in going up the Red Sea.

At the period of this voyage the sun was to the south of the equator. The land wind, which in the morning blew east, veered to south-east, then to south; and by mid-day it had attained south-west. After noon it veered to the west, and declined before night at north. The same revolution occurred every four-and-twenty hours, and, in consequence, vessels might pursue their course slowly in either direction. This accounts for the voyages of the ancients, who crept as we did along the shore, taking forty days to reach the mouth of the Red Sea, from the port of Berenice; and forty more to gain a harbour on the Malabar coast. I once sailed in a *patamar*, or boat of India, similar to the *djerm* of the Red Sea, along the coast of Malabar, at a time of the year when the sun was north of the equator. The same alternating winds prevailed as those I have described, save that they veered by north, and the same method of navigation was adopted, though there were no reefs or shoals to contend with.

Fish of brilliant colours abound beside the coral reefs, some spotted with glowing green and blue, others tinted with bright red. Several were caught by the natives, and proved to be wholesome food. In floating above the coral, the transparent water often causes a sensation of great alarm, and gives a full view of different kinds of corals or madrepores, peculiar to the Red Sea; such as the fungous or mushroom coral, with a round head like a cauliflower, and others of various hues. Some strings of beautiful black coral were offered for sale on this coast. It is held in great repute by pilgrims proceeding to Mocha, and may be procured at Jiddah, but I could not find any in Egypt.

Passing reefs and islands, we reached the Island of Kotambul, rising in a conical form, high above the sea. A few miles from it on the main land, we arrived, on the 13th, off the town of El Cassar, occupied by Bedouin Arabs, whose scattered habitations are planted round a bay. Camels were feeding in an inland jungle, or brush-wood hollow.

The tribe that occupies this country, is called the Tent Arabs, and is very numerous. The females, contrary to the general custom among Mohamedans, uncover the face. El Cassar was the first town we saw on the coast, without a fort or battlement. The Bedouin requires no defence beyond his sword, and surrenders liberty only with life. A few miles above El Cassar, Arabia Felix terminates, and the territory of the Hedjaz, or Arabia Deserta, begins.

With light and variable winds, and creeping within the chain of islands and reefs that runs nearly parallel to the coast, on the 15th we reached Camfoodah. It had been found necessary to anchor during the night, in consequence of the difficult navigation. At Camfoodah we were received courteously by the *Dowlah*, or governor. Four or five hundred of the Pacha of Egypt's Turkish troops being quartered here, the place had a respectable appearance. The town is walled and defended by some cannon. It has a well-supplied Bazaar, and water is brought from a distance. The houses, which are built of blocks of coral rock, cut twelve or fifteen inches square, appear to be of a very perishable nature. Without the gate of the town, there are numerous huts for the labouring people and Bedouins, who come to market.

The water is so shallow at this part of the coast, that camels are employed to load the trading boats, of which there were about twenty at anchor. I paid a visit to a coffee-house, where many Turks were playing at backgammon, and others smoking. I examined the pistol of one, and found it in good order, and primed for ready use. Some of them accompanied us to the ship, where, in despite of the injunctions of the Prophet, they drank as frequent and as deep potations as the most zealous devotee of the bottle could desire.

We continued to sail with light winds, and on the 17th landed, to visit a town which, from the ship, appeared to be about a mile inland. We had been deceived by the mirage, or false meridian; for as we proceeded towards it, the distance seemingly increased, till it at length retired several miles off. We were about to return, when some of the boat's crew begged leave to run to a neighbouring lake. This also proved to be a deception, one of the many instances of illusion caused by the same phenomenon. I often found it quite impossible, in consequence of the floating sheets of vapour, to form any judgment as to distances. The mirage supplied the following picturesque simile in the Koran, "As to the unbelievers, their works are like a vapour in a plain, which the thirsty traveller thinketh to be water, until, when he cometh thereto, he findeth to be nothing."

Our progress, in consequence of the light winds, was slow, and it was not till the 23rd that we reached Jiddah.



VIEW OF JEDDAH.

Taken from the West



JIDDAH.

THE numerous coral banks render it necessary for large vessels to anchor at some distance from the town. Owing to the reefs the channel is difficult even for boats, which are often required to be shoved directly over them. This natural barrier is looked upon as a great means of protection to the place, and a survey then in progress could only be carried on by stealth. The governor was forced to listen to the prejudices of the people, who remonstrated whenever a flag was hoisted for a station.

The view in the plate is taken from the anchorage, amidst fields of coral, more or less covered by water, producing a beautiful variety of colours, and a striking contrast to the deep blue sea. The town, which shews a front of a mile, with half that extent in depth, is divided by sand-hills from the far range of mountains. A wall, in tolerable repair, and broken by towers, surrounds the town, and forms a sufficient protection against the Arabs. Two gates, ornamented by turrets, are the only points of egress. A wall, like that at Mocha, runs along the sea. On the right is the governor's house; at the opposite end, a fort: the intermediate space has a quay, on which the best houses of the place and the khans of the merchants are erected. Many huts, of a mean description, are concealed by the better dwellings; the latter are two stories high, built of the crumbling coral rock, or marine fossils. There is no regularity in the buildings; windows of all sizes are indiscriminately mixed, many of them being highly ornamented with elaborate carved work. Nothing breaks the sterility around Jiddah but a few date trees; water may be had for sale, but it is generally of a very bad quality.

To the north of the town surrounded by other tombs, is one with a circular top, believed by the Arabs to be that of Eve, the mother of mankind. It is said by Burekhardt to resemble the tomb of Noah, as pointed out in Syria. I failed in examining this tomb, as the Arabs would not permit me to cross the graves of the Moslem that surround it. Monuments, said to mark the head and feet, stand about sixty yards asunder. Near the tomb is the gate leading to Medina, through which there appeared to be little thoroughfare. A second gate with tents before it leads to Mecca, which lies in a direction nearly east, about fifty-five miles. On the road to the Holy City there is a constant line of travellers, and immediately without the gate are numerous coffee-sheds for their reception, where loungers assemble to take their pipes. I walked with two companions through this passage. We had not proceeded far, when a strong feeling of curiosity was exhibited by the Arabs, of whom there are a great many residing outside for the purposes of traffic and pasturage. We saw the gathering storm evinced by a crowd of wild-looking people, jumping and throwing dust in the air, flourishing sticks, and arming themselves with stones. They soon approached, and, though we turned towards the town, stones were thrown in all directions. At this critical moment, a Turkish officer, well-armed, happening to be in the neighbourhood, came to our relief.

Caravans continually assemble on this road, and proceed every evening to Mecca. This mode of travelling in the East is most convenient, and useful for the purpose of defence. One traveller's tent is pitched without the gate, and others pursuing the same course place themselves beside it, till, at length, the numbers are sufficient for mutual protection.

Jiddah, besides being the sea port of the Hedjaz, is the emporium of trade between Egypt, India, and Arabia. The principal article of import from Egypt is grain, the trade in which Mohamed Ali has taken entirely into his own hands. To give an idea of the profit, Buckhardt mentions, that during his residence in Jiddah, (1814) the *erdeb* (fifteen English bushels) of grain was sold at from 130 to 160 piastres, (about 13 or 16 Spanish dollars.) The same quantity cost 12 piastres in Upper Egypt, and including the carriage to Jiddah 25 or 30 piastres. Another example of the state of trade here is afforded by the traffic in Indian goods, which are purchased on the arrival of the India ships, and raised ten per cent. almost immediately; they continue to rise, and always attain forty per cent. on the cost price before the arrival of the next annual supply. To such a discouraging system the people of this country are obliged to submit, and they are not likely to find a remedy, unless a mart be opened by enterprising Europeans to relieve their wants, and impart some stimulus to industry. The vessels that trade with Jiddah are calculated at two hundred and fifty; and the value of the yearly imports is estimated at £1,000,000. This maritime intercourse could be totally cut off by a single British cruiser, which may be taken as a security for our peaceful and uninterrupted navigation of these seas.

The cruiser in which I left Bombay was to remain at Jiddah, for the purpose of surveying the harbour. It was with considerable regret that, on the 2nd of December, I made preparation to separate from my companions, and pursue my voyage in an Arab buggalow. I had the satisfaction of being accompanied by an officer of the Indian navy, who was proceeding onward to join his vessel, then employed in surveying the sea of Suez. Our buggalow, which was rated at 250 tons, carried some rusty guns, and was commanded by a Turkish nakoda, or captain. The crew, including the mate, was composed of four Arabs and eight Africans. There was not a man too many to hoist the main-yard, with its enormous latteen sail, the only piece of canvas that was spread, except a very small after-sail in occasional use, chiefly to assist in steering. The fashion of our vessel was as ancient as the rig was simple. She had one clumsy mast, nearly a mid-ship, with a considerable rake forward, on which a yard 85 feet long, or the exact length of the buggalow, was suspended with such a slant, as to make one end nearly bend to a rude figure at the bow, to which the tack of the sail was attached. Boltsprit there was none, and the vessel's breadth was one-fourth of her length. A rude-built oven of mud was used for the unleavened bread, which is preferred by the natives to biscuit. A good-sized cabin was

YAMBOO.

taken off the stern, but the whole was rudely finished, and with as little attention to cleanliness as to ornament. Innumerable cock-roaches swarmed in all parts of the vessel. A broad strong plank crossing the deck assisted to support the mast, and defined the boundaries marked out for the crew. Wood and water were furnished to the passengers, who made their own arrangements for all other supplies. There was a compass on board, but it was several points out, a matter of slight consequence, as the sagacious commander would not have attended to it had it been ever so trustworthy.

We pursued the voyage on the system that has existed from time immemorial, the coast being servilely followed in all its bendings; and night anchorage, if required, was secured by mid-day. When it was doubtful whether a haven could be attained by sun-set, there was no hesitation about returning to the place we had quitted in the morning. Under these circumstances, little progress could be made in the most favourable weather. A light wind carried us amidst coral reefs, and gradually wafted us beyond sight of the *Benares*, and of Jiddah. We anchored before sun-set to the leeward of an island of coral. The process of anchoring was performed by one of the crew jumping overboard, bearing a large iron hook, which, on the vessel's approaching the bank, he attached to the branches of coral. If another reef lay at a convenient distance a-stern, a second hook was fastened to it, and then the craft was held to be effectually moored. Having completed this operation, the large sail was always taken off the yard to be stowed away, though requiring half an hour's work each morning to bend it again; so that the average sailing was about eight hours in the twenty-four. No bottom could be discovered immediately alongside the coral banks. Whatever wind might prevail in the centre of the sea, the land breeze continued to blow on the coast within these banks.

Passing an inland mountain chain we worked our way through coral reefs, or islands, extending several miles from the shore. We met many boats during our voyage, and it was seldom that we had not a companion in coming-to for the night. The stages appear to be regularly established; and a wild hurra is given by the mariners on reaching them, which is always answered from other vessels, if there be any already at anchor.

YAMBOO.

On the 9th we reached Yamboo, a walled town, the sea port of Medina, as Jiddah is of Mecca. Though it has an excellent harbour, it is of inferior importance to Jiddah, and contains about three thousand inhabitants. A continual supply of grain pours in from Egypt, which is instantly conveyed to the interior by the Bedouins, who are in readiness with their fine camels. Turkish troops are stationed here, and form strong guards on the gates. They offer a striking instance of the advantages possessed by a small body acting in concert over a numerous people without combination and system. The Turkish mode of ruling and taxing the population of Arabia, is entirely military; and the tenure of the Osmanlis' sway, destitute as it is of any local bond, is most precarious, and would ter-

WHOOSH.—GWOBAH.

minate with the appearance of a single man of war hostile to the Pacha. The Bedouins at Yamboo are a noble race, and, armed as all are with dagger and spear, they seem to bid defiance to the world.

Being ready for our departure from Yamboo, I waited to take leave of the Dowlah, who was decorated with orders, and formed a fine specimen of a soldier. He had been particularly attentive, and had more than once expressed his astonishment at our undertaking what appeared to him an interminable journey. I found, throughout the Red Sea, that Egypt was known by the name of Misser; beyond that country the natives of Arabia know little of the globe.

The Dowlah gave me a letter, prepared by his scribe. Rubbing some ink on the signet ring he wore, which bore his name in Arabic characters, the impression was transferred to the document, and rendered it official. There was considerable dignity in the style of the transaction. After presenting the letter, he exclaimed, in a solemn tone, "May God carry you safe," and we separated.

On the 10th of December we sailed from Yamboo, having replenished our stock of fowls and vegetables from a tolerably good bazaar. The weather was gradually becoming cool, the thermometer varying from 68° to 78°. This alteration of temperature had a decided effect on the natives. In the morning they were unwilling to move, and it was ludicrous to see them come forth, with clothes of many colours, and as many pieces, their heads bound up, and their countenances the picture of misery. The effects of the change of weather would scarcely be believed, except by those who have experienced the transition from a tropical climate.

On the 12th we passed a Bedouin village, the country still preserving the same character. Shoals lined the coast, and a wide belt of sand separated the sea from the mountains, which proved to be the same connected chain running from the north. We had here a specimen of native seamanship. A fine breeze took the vessel by three o'clock, fifteen miles from the anchorage, and there was no certainty of gaining the next station before sun-set. The Nakoda insisted on returning to the place he had left in the morning; and no persuasion could arrest his determination. During this time we had another example of the inferiority of their nautical system. The cold having rendered the crew almost useless, the captain proceeded to urge them by blows from a stout stick. About to extend his tyranny to the mate, who was an Arab, a scuffle ensued between them, which led to a fair trial of strength, when it became doubtful whether the superior weight of the Turk, or the agility of the Arab, would prevail. They were at length separated, and a war of words ensued; but the bullying captain did not venture to renew the combat. He had a few days before mercilessly flogged an African, who, though much stouter than the Arab, did not dare to resist.

We arrived on the 20th at Whoosh, or Whee, where there is a snug harbour, and a half dozen of huts. There is good water, which, with charcoal and rock salt, forms the traffic of the place. A back water runs among hills of bold and romantic shape. Arabs living in clefts of the rocks, and tending flocks of goats, add to the wildness of the scene.

On the 23rd we reached a good harbour, named Gwobah. It supplies wood and water, and

appears to be a regular halting place. Several buggalows were anchored here; some of them conveying loads of pilgrims, among whom were a number of Turks. They all landed; and the shore presented a most animated scene. There were a number of females of the party, and several girls exposed their faces. Their hair was long and curling, their figures slender and graceful, and they had much delicacy and expression of countenance; but there seemed to be a want of health and freshness, the consequence of their secluded life. They wore ornaments on the arms and ankles, and about the neck, and I saw enough to be convinced that there was much beauty beneath their masquerade dresses.

Bedouins were strolling about, offering a few articles for sale; their women were uncovered, and offered a decided contrast in figure and complexion to the delicate inmates of the harem. Beyond the walls, in recesses of the rocks, or in rude huts, jars and leathern sacks to contain water, and some wooden bowls, pointed out the residence of the natives, whose riches consisted of a few goats or mules that were seen vainly searching for herbage on the mountain sides. The manner in which these animals take their allowance of chips, that seem calculated to choke them, is surprising.

The next day we anchored in a small harbour, called Ghebeer, where no habitation was to be seen. An Arab made his appearance on the shore, with a camel load of water; but not finding any demand for it, he departed.

On the 25th we came in sight of Ras Mohamed, on the extremity of the tongue of land that divides the sea of Akbar from that of Suez. The Egyptian coast was also visible; we had worked up about a hundred miles above the latitude of Cosseir. The weather was fine, and the wind fair; still the captain reluctantly consented to cross the sea. He would have preferred anchoring under Ras Mohamed, in conformity to custom, rather than gain three days, which he did by crossing.

In taking a last view of Arabia, the traveller feels an interest that is indescribable. He leaves a country and a nation behind him, whose habits have been the same for more than three thousand years, and whose customs verify all that is predicted by the sacred historians of the descendants of Ishmael. There was another, and a not less interesting subject, brought to my mind the day I crossed the Red Sea. On the hills above Ras Mohamed the law was promulgated to mankind, and on those shores the Israelites were miraculously protected for the furtherance of the Divine purpose.

From Mocha to Ras Mohamed the Arabian shore has one pervading characteristic—very high mountains in the back ground, with at times an under feature projecting near the sea, and occasionally the mountain so far removed as to be distinguishable only in clear weather. A belt of sand, mixed with coral shells, uniformly borders the base of the mountains, and often sweeps miles inland nearly on a level with the water. The hills, which are distinguished by pointed summits, are intersected by deep ravines, evidently the effect of violent rains.

Coral islands and reefs stretch all along this coast, and form a parallel line, extending about thirty miles from the shore. If a line were drawn at this distance, it would be the best map that could be given of the coast. It is probable that the coral reefs, rocks, and islands, will spread and rise in

height, and that the intermediate space between them and the coast will ultimately be filled with sand and shells. Three different races of people divide the dominion of the Red Sea; Arab, African and Turk. The Arabs may be divided into two classes—those of the desert and of the towns, who are distinct in habits and interests. The territory of the east side of the Red Sea, held by the Turks, comprises the sea-ports as far south as $16\frac{1}{2}$ degrees of latitude, including nearly one thousand miles of coast; their possessions do not extend below Cosseir on the west side. For centuries the Bedouins have made no advances in arms or discipline; they are ignorant of the use of cannon, and do not act in concentrated force. The Turks may be said to possess merely the land they stand upon; and when they move, it is in bodies, and always well appointed.

A line drawn from Suez to Bagdad will inclose the space between the Red Sea and the Persian Gulf; and from the northern boundary to that vast country, called Arabia, the distance is about six hundred miles. The opposite side of the peninsula is washed by the Arabian sea, and is about one thousand miles in length. The east and west sides are almost of equal length, each being twelve hundred miles. Arabia has a surface of nearly one million square miles; with a population estimated by some authorities at ten, by others at twelve millions, and yet, but for the concourse of pilgrims to Mecca, it would be as little known as Siberia.

Though the roads to Mecca and Medina are left open, the Bedouins never become more sociable, or seek to benefit by the introduction of strangers. They levy their contributions in the Desert, and are careless of profit in a regular way; they are as much dreaded, and as little known by their countrymen, who are settled or civilized, as by Europeans.

As we neared the Coast of Africa, the land, like that on the opposite coast in the same latitude, presented the remarkable appearance of innumerable heaps of earth thrown upon the surface. Our captain did not make direct for the harbour of Cosseir, but came to a secure anchorage amidst coral at a haven about twelve miles above it.

Early on the morning of the 27th we got under weigh, and reached Cosseir at ten o'clock. About forty boats were at anchor in the port, with one of the Honourable Company's cruisers, which had left Bombay five weeks later than myself, having made the voyage direct. Several passengers had landed from the cruiser, and had proceeded on their route to the Nile the day before my arrival. Anxious to overtake them as soon as possible, as I was from this time to lose my former companions, I resolved on quitting Cosseir in the evening.

Cosseir is the great port for commerce between Egypt and the harbours of Jiddah and Yamboo. Vessels find safe anchorage within a coral reef; and there are generally from thirty to forty lying there for the purposes of trade. The town is situated on a low sandy soil, and is crowned by a fort. A projecting pier, which affords a convenient landing place, leads to a busy and crowded Bazaar, at the side of which, and approached by a single gate, is an extensive *okella*, or *caravanserai*—a square court, with buildings two stories high, having a broad gallery all around. Numerous doors lead into apart-

ments of eight and twelve feet square, which are hired by merchants and travellers. The whole is secured by a proper guard at the entrance. The succession of travellers from all points of the compass, arriving at these stations in Egypt, would impart sufficient interest to the spot to make it a desirable resting-place for a few days, were it not for the intolerable want of cleanliness that neutralizes its attractions. The dwelling of the governor, and some store-houses, constitute the remainder of the town, which, from its unpromising situation, contains few, save commercial residents. The water, which is made an article of traffic, is brought from a distance. It is impregnated with salt-petre, and induces vomiting and dysentery. In Sir David Baird's army, which arrived at Cosseir from India, almost every one, on first landing, was attacked by dysentery, but it did not prove fatal, and indeed was thought eventually to be rather salutary than otherwise.

On my arrival at Cosseir, I called on the Turkish governor, who received me in the kindest and most friendly manner, requesting to know my wishes, that they might be attended to. Only four camels were necessary for my journey, but had more been required they would have been readily furnished. Horses and mules may also be obtained without any difficulty, and the traveller may calculate on finding in the Bazaar all that he requires for himself and his followers. The hire of each camel to Khennéh on the Nile, which is the line for commercial intercourse, was three-fourths of a Spanish dollar. As I determined to direct my course to Luxor, considerably above Khennéh, the hire was raised to $1\frac{1}{4}$ dollar. There are different roads through the Desert to the Nile, and I selected the one by Hammer-mart, which is most frequented by natives and Europeans. I would recommend travellers, who study health and comfort, to provide themselves in India with a supply of necessary articles, that cannot be procured before reaching Cairo, and then only at an extravagant price. Each camel will carry a load of six or eight hundred weight; and their services being attainable at so moderate a rate, while no further land carriage is required after arriving on the Nile, except, perhaps, between Rosetta and Alexandria, it is prudent to make a liberal provision for travelling contingencies, and not to deny ourselves the possession of specimens of the productions of the countries we traverse. Two chests of equal size, with handles and good locks, easy of access, and not requiring lashing, will be found of great utility. The stores should comprise two dozen bottles of water, with tin canisters containing some biscuit, tea, sugar, rice, and wax candles, a jar of pickles, a little currie powder, some portable soup, a few dried tongues, with the lesser requisites of pepper, salt, mustard, &c. A lantern will prove serviceable at a certain stage of the journey. To these articles should be added a supply of wine and spirits, and a few pint bottles of the latter for presents, which are by no means objectionable even to the followers of Mohamed. A few snuff-boxes and clasp-knives may be added for the same purpose, nor must a little tobacco be forgotten, as it is exceedingly acceptable to the camel drivers, boatmen, *et id genus omne*. These, with a few dinner and breakfast things, will fill the chests. A sea-cot, furnished with some warm bed clothes, and having a strong frame to adapt the ends for resting on the chests, a portable table and chair, or stool, with a carpet the size of a hearth-rug, will complete one camel load:

a pair of trunks, containing clothes, linen, books, writing case, a little medicine, a canister of gunpowder, and some Spanish dollars, with a small tent, will form a second load. A camel must be placed at the disposal of the domestic, who hangs on either side of the animal a large pannier or basket, in which some charcoal, sticks, cooking utensils, with table furniture, and other essentials of his department, are deposited. On the top of the baskets he places his clothes and bedding, and most contentedly poises himself cross-legged above all. The fourth camel is appropriated to the use of the traveller, who will find it a good plan to fasten his mattress across the sharp native saddle, that has a handle rising in front, to which a haversack containing a few biscuit, and articles for immediate use, a spy glass, and pair of holsters and pistols, if thought necessary, may be attached. A sword ought not to be dispensed with, as it is looked on as a mark of rank. Water is carried in *mussecks*, or skins of goats or pigs, provided by the natives, who distribute them about different parts of the baggage in such a way that they may always be accessible during the march. A good warm cloak and warm clothing had better be kept at hand, and an umbrella will not be an unwelcome addition to the stock. Thus equipped, a traveller will be able to prosecute his journey to the Nile, at an expense of five or six dollars. A very small sum will satisfy the drivers, who are always ready, for a little tobacco, to render every possible assistance in pitching tents, lighting fires, and ministering the requisite aid to the wayfarer. It will be necessary to break a few Spanish dollars into piastres, of which there were fifteen to each dollar, and these ought again to be exchanged for *paras* or *hamassee*, of which there are eight to a piastre, or one hundred and twenty to a dollar. The para is used to buy trifling articles, as milk and eggs, and to satisfy poor pilgrims and mendicants, of whom there are a great many in all parts of Egypt. Even this fraction of our smallest coin is valued by the people of the country, who have yet a smaller one in circulation, of which forty go to a piastre, or six hundred to a dollar; and there are quarter-piastres and half-piastres, all base coin, and of no value but in Egypt.

Soon after leaving Cosseir the road begins to ascend, and leads through hills into mountains with roads of sand and gravel firm enough to bear artillery. These roads appear strikingly similar to the deserted beds of rivers. The Desert of Cosseir, like the wilderness in Arabia, has a burnt and naked appearance. The acacia, and some few thorny plants, nourished by night dews, occasionally break the sterility, and offer a slight indication of vegetable life.

In crossing the Desert, the Arab attendants will endeavour to get the party to travel according to their accustomed stages, and thereby pass from the Red Sea to the Nile in three days. This must be attended with considerable inconvenience to persons unaccustomed to the motion of camels. The best plan is to have no fixed determination, but to halt when convenient, whatever number of days may be spent in this way. The novelty of the situation and incidental circumstances will sufficiently beguile the time.

In different parts of the mountains there are remains of quarries and niches, or small temples, covered with hieroglyphics, which have been very little examined. I ascertained that the rate of march

of the camel averaged two and a half miles per hour, and it was nearly the same at the end as at the beginning of a long day's journey. It might be increased a little in the coolness of the morning, and reduced in the heat at mid-day. Winding through the mountains, the traveller reaches the first stage, where two wells, called Bir-Inglis, afford tolerably good water. My approach to this spot was at night, having travelled from Cosseir, a distance of eleven miles, in about four hours and a half. We stopped a few minutes to secure the loads. The stillness that had prevailed throughout the journey had been rendered more solemn by a humming noise from the camel-drivers, who seemed to whisper a song to their cattle. The novelty of the situation gave rise to reflections that were suddenly dissipated by a shrill whistle from one of our attendants. A similar sound came echoing down the valley, and in a few minutes the appearance of several fires shewed that we had arrived in the neighbourhood of other travellers. The first fire we passed, threw a deep broad light on the faces of some Arabs, from whom our approach brought forth a friendly exclamation of "Salam Ali Koum!" To this, a suitable return was made, and we passed on to bivouac in the same style as our Desert companions. There is a regular plan for forming each encampment. When a tent is pitched, the fire is made in front, and then the attendants cover themselves completely from head to foot with their *abbas*, or cloaks. The camels are placed in a semi-circle in front, and remain all night on their knees, with heads and tails in mutual contact. The line, if necessary, is lengthened with the luggage, which also shuts in the flanks, to form a junction with the sides of the tent.

The morning was remarkably cold at six o'clock, and it was with great difficulty our camel-drivers were prevailed upon to bestir themselves before the appearance of the sun. All the caravans that had assembled on the previous night were getting in motion; some taking the road to Cosseir, others to the Nile. The ground they had occupied was a large recess in the mountain. We proceeded by a route such as that we had hitherto pursued; and on the second day started in company with a large caravan. Hills and distant mountains afforded variety to the eye; but the scene was melancholy, and with nought to animate it, save a few partridges and pigeons, whose sources of subsistence it was difficult to divine. Having travelled about five hours, I enquired for the halting-place, and learned that the caravan intended to advance directly onwards to the next stage. I stopped with my servant to prepare breakfast, during which I was accosted by half a dozen poor Arabs, who were journeying towards Mecca. They had a minimum of clothing, and each carried a small bundle, pendant from a stick borne across the shoulder. This was the extent of their worldly possessions; their poverty and their distress were equally evident. They asked for water with an earnestness that determined me to relieve them; but I found that the water bags had proceeded with the remainder of the caravan, and I then perceived the propriety of independent travelling, without adhering to fixed stages. The poor Arabs, who were Hadjis, were not more disappointed than myself. They turned into the mountain, where I understood they would procure water at a distance of six miles. After a short rest, I started to overtake the caravan, which I did not join till I had travelled nine hours, making

a day's journey of fourteen, which was the regular stage. Our party, with many other travellers, had halted at Bir-a-Cid, where there is a well of good water. The Arabs, from the noise they made, appeared to be regaling themselves. They had kneaded thin cakes of wheat, which are soon baked on hot ashes made from camels' dung; with the addition of water, all the wants of these children of nature are supplied. Each man carries a cherry stick, which may be converted into a pipe by adding a clay bowl, and if a little tobacco can be obtained, they acknowledge it as a luxury. It was too late to make arrangements for the night beyond unpacking my baggage. The sky formed a canopy, and shot forth stars of the liveliest brilliancy, and there was a purity in the air that felt like a boon from above to the wearied slumberers.

The third day brought us amidst hills and rocks of the most pleasing variety. Now we were greeted by distant ranges, with summits of fantastic shapes; and occasionally the rocks would close in and overhang the road, scarcely admitting a passage. It was in the valley of Cosseir that Bruce says he passed more granite, porphyry, marble, and jasper, than would build Rome, Athens, Syracuse, Memphis, Alexandria, and half a dozen such cities. Many passages turn from the road into the mountains, and one that I explored led to a field of fragments, plainly denoting that extensive works had once been carried on there. The quarries are not of much depth, but cover a large surface; any one seeing them would concur in thinking that the Egyptian architects could not have found it necessary to go further for materials. In continuing to pass through similar hills, a variety of granite was conspicuous, some of it sculptured with hieroglyphics, probably in the idle hours of the workmen. Small recesses, or temples, were occasionally seen in the sides of the rocks, and many bold broad fronts of granite seemed to invite the sculptor's chissel. Having journied four hours, I arrived at Hammer-mart, a well 100 feet deep, lined to the bottom with stone, and having a flight of steps for descent. Little benefit has been derived from the expense bestowed upon it; the quantity of water at the bottom is brackish, and so limited as only to be extracted by soaking a cloth in it and wringing it out. Not far from this well there is a broken sarcophagus, which shews that the Egyptians, in bringing stone from the quarry, shaped it so as to lighten it for transportation, leaving the work to be finished at the place of its destination.

When I started in the morning, the thermometer was at 60°; at the hour I halted it was at 98° in the sun, and 82° in the shade. It was with difficulty I could procure any shelter under the perpendicular cliffs. I felt the necessity of having a tent, as much to guard against the effects of heat by day as of cold by night. The rush of hot air that floated through this valley, and the distress caused by the reverberation of the atmosphere, produced the greatest inconvenience edduring the journey. Towards evening the thermometer fell to 80°. I proceeded for some distance, admiring the bold forms and the varieties of granite. I observed occasional ruins of forts, and a continued chain of small towers crowning the heights throughout the line of road; no history could be obtained of either. Similar remains are visible above Aden.

ROUTE TO THE NILE.

Towards the close of this day's march the valley began to extend, and the bold-featured mountains gave way to hills that ushered us again into the broad Desert. My guides urged me on with the hope of soon reaching the wells at Legayta, but growing tired I at length determined to stop. My resolution was, however, defeated by a noise from the camel-driver, which stimulated the animal to move onwards, and to resist all my counter-pulls and jerks. I was at first inclined to storm, the more so as the whole party had dropped behind, and were perhaps amusing themselves at my expense. The helplessness of my position soon created a feeling of amusement; the patient animal I was riding obeyed his master, and answered my threats by an indication of displeasure, turning his head, and making a disagreeable gurgling noise. In the midst of this dilemma a shrill whistle caused the camel to fall on his knees, as if shot, and here I found it was determined I should take up my night's abode. This day I had travelled nearly eleven hours, and suffered considerably from fatigue. Travellers would do well to fix their day's journey at eight hours, and to abide by it. Early in the morning of the 30th, the cold was so severe as to make it most difficult to rouse the attendants: the thermometer was at 53°, and there appeared to be some additional chill from saline particles intermixed with the sands of the Desert. Our path now lay across a sea of sand, with broken and rounded undulating forms, such as would be formed by drifting snow. In this open country there are some deer, which are as shy of man's approach as are their light-footed fellows in more civilized lands.

It is not uncommon in the Desert to see the bleached bones of camels, and sometimes the skeleton retained enough of flesh to make it an attraction to beasts of prey. This morning we passed a carcass that afforded a rich banquet to the jackalls. The revellers would scarcely abandon their carnival on our near approach, and then, by an angry snarl and growl, testified their dislike to our intrusion. The food was fiercely contested by fierce bands of ravens which infest the wilderness. These birds were pulling at opposite parts of the carcass, and screaming a response to the menace of the snarling enemy. A journey of two hours and a half brought us to the wells of Legayta, where there is an abundance of good water. There are also Arab huts, the inhabitants of which offer milk, eggs, and poultry for sale, and a caravanserai with some tombs of sheiks, the shady side of which a European traveller will prefer to the interior of the inn. While resting at Legayta there is much to amuse the loiterer. Caravans are scattered over the plain beneath, and lines of camels, with merchants and hadjis, make the roads distinguishable as far as the eye can reach. One route runs direct from Khenneh, and another from Luxor or Thebes. They meet near the wells, and unite with two other routes that lead in different directions to Cosseir. The bearing of these routes runs as follows:—to Luxor W. S. W.; Khenneh N. W.; Cosseir by El-boo-eb E. by S.; Cosseir by Hammer-mart E. N. E. The route generally pursued from Legayta towards the Nile has been by Khenneh, in which case about eight hours' travel, or twenty miles, brings the traveller to Bir Ambir, where there is plenty of good water on the borders of cultivation; and after journeying about six hours more he reaches Khenneh, on the margin of the Nile. By proceeding to Khenneh, boats are procured for prosecuting the voyage on the river. The

ROUTE TO THE NILE.

time taken to ascend from thence by water to Luxor is probably two days, though the distance downward will be run in twelve hours. It saves time and some expense, by proceeding first to Luxor; and if boats are not forwarded from Khenneh, there will be no difficulty in reaching the latter place either by water, in a small boat, or on camels in two marches. In the evening I journied for six hours over the same sandy track that is seen about Legayta, and came to a pause, with the full expectation that the ensuing morn would usher in many interesting objects, and above all, "the land of Egypt." My impatience caused me to advance the following morning before the surrounding country was visible; the misty curtain began to dissolve, and gradually gave way to a clear atmosphere, through which it was easy to distinguish clusters of date-trees, and patches of green that marked the fertile banks of the Nile. My camel shewed by a quicker step, at the same time pointing his head and snuffing the air, that he had partaken of my satisfaction in arriving near the site of the rich harvest which began every where to develope itself. The first village reached is Hajaza, where there is a mosque, with a bath for ablutions, inestimable to the Hadjis on their return from the city of the Prophet. It is a gladdening sight to mark the reservoir overflowing with water, and the luxuriant crops, in the beauty of their verdure, after just emerging from the cheerless confines of the scorching Desert.

The path continued to wind on the edge of cultivation, till it struck through the level plain, which, influenced by the waters of the Nile, was now smiling with the promise of plenty. We crossed the plain on elevated banks, where the narrowness of the road, and the steep slope for twenty or thirty feet, often make the stranger withdraw his attention from the surrounding scenery to contemplate his awkward situation, especially when a dead camel appears in the path, or on the side of the bank, to the alarm and agitation of the one on which he is mounted. Slowly advancing, here and there arises a village, having the character of a little fortification. The walls of each house are built to a height of eight feet, and are covered with flat roofs. Heaps of dirt and rubbish, with a pond of stagnant water, typify the squalid and neglected state of the *fellahs*, or peasants, of the country. Clusters of date trees point out the situation of numerous hamlets in all directions, and on the bank of the river they are sufficiently connected to indicate its course.

The whole country wore the aspect of an immense garden, in which all the productions of other countries seemed combined. There was no ostensible division of property; nature in her bounty appeared to bestow more than the wants of the people could require. Yet, in the midst of this abundance, and as in mockery of the gifts of Heaven, poverty and wretchedness were stamped upon the tillers of the soil, giving sad evidence of the blasting effects of a long period of misrule. A deputation of several of the villagers invited me to alight, and eggs, milk, and other viands were produced to second the request, but I declined the invitation, for the magnificent ruins of Thebes began to be distinguished.

Thus had I, without any difficulty, journeyed in about forty-three hours from Cosseir to the Nile. The novelty of the scene, the feeling of voyaging on "the ship of the desert," across a sea of



APPROACH TO THE RUINS AT CARNAC.

from the South West

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APPROACH TO THE RUINS AT CARNAC.

THE road, which, on emerging from the Desert, winds amidst the cultivated grounds, suddenly ascends, and the musing traveller is startled to find himself unexpectedly near and on the approach to the Ruins at Carnac.

An avenue, twenty yards wide,* leads to the temple, the ruins of which are partly seen in the background of the Plate. Fragments of sphinxes line the sides of the road, at intervals of ten and twelve feet, and usher the visitor to the magnificent granite propylon or gateway, whose grandeur for a time monopolizes the attention, and makes him who gazes on it at a loss to decide whether he shall remain admiring its fine proportions, or advance and examine the carvings which embellish its front. Is this "the land made waste by the hand of strangers, who destroy the idols, and cause the images to cease?" The fragments of desolation that lie scattered around, are identified with the predictions of the inspired historians, by whom we are enabled to estimate the "palmy state" of this once mighty kingdom, whose gigantic monuments fully verify all that has been said or sung of its pristine splendour.

The temple of Carnac is supposed to have been the grand sanctuary of the idolaters of Thebes, a city immortalized by Homer, as

"The world's great empress on th' Egyptian plain,
That spreads her conquests o'er a thousand states,
And pours her heroes through a hundred gates."

He who arrives in front of this propylon finds himself on the highway to the temple, and becomes bewildered by the recollection of former glory and the sense of present decay. Each massive fragment conveys a silent reproof to the vanity of man. Where are they who piled up this Titanic fabric? Where are the successive nations whose chiefs entered within its walls in the exulting hour of triumph? The noble entrance recalls the fabled magnificence of Sesostris. Perhaps the greatness of a haughty Pharaoh may have been pictured in the stately obelisk. We know that Cambyses and Alexander have trodden this ground, and, as the instruments of divine vengeance, have despoiled the images that adorned it.—Such are the reflections that pervade the mind of the traveller until he is aroused by the howling of dogs from the Arab village in the west end of the ruins. These unwelcome intruders become more noisy and daring, and are soon followed by their mendicant masters, who henceforth persist in crossing the path of the stranger, surveying him with an unmeaning stare.

The avenue of sphinxes, from which the view is taken, is one of several that lead towards the temple, or form lines of junction with each other. Lions' bodies, represented couchant, were here

* Marked A in the Plan of the Temple at Carnac.

seen surmounted by the heads of rams, but at present none of them are perfect; they are formed of sand-stone, which has given way to the ravages of time and man. The ram's head with the lion's body was symbolical of strength and innocence, and expressive of the power and purity of the gods. The little image that stands between the huge paws of the lion is $4\frac{1}{2}$ feet in height. In its clasped hands it holds the sacred *tau*, and on its front is a row of hieroglyphics. In the back-ground the main edifice has its north-west boundary marked by the gigantic propylon (*B*) that rises beyond the trees. We enter a spacious court, (*C*) at whose sides are colonnades, with two rows of gigantic columns that pass through the centre, leading by another propylon to the prodigious hall or portico, (*D*) whose roof was supported by 134 columns, and which forms the subject of the subsequent illustration. Four beautiful obelisks next present themselves, and two smaller ones mark the entrance to the Adytum, (*E*) thus mentioned by Hamilton. "The Adytum itself consists of three apartments, entirely of granite; the principal room, which is in the centre, is twenty feet long, sixteen wide, and thirteen feet high. Three blocks of granite form the roof, which is painted with clusters of gilt stars on a blue ground. The walls are likewise covered with painted sculptures, of a character admirably adapted to the mysterious purposes mentioned by Herodotus, on the subject of the Virgins, who were there introduced to the Theban Jupiter." Beyond the Adytum there is a confusion of porticos and galleries, terminating at another propylon, about 2000 feet from the one that lies on the north-west of the temple. An avenue of sphinxes, uncovered by the Earl of Belmore, as described by Dr. Richardson, forms an approach to the last-named entrance at the great temple; but the grand approach appears to have been at *F*, to the east of the one depicted in the Plate, and running nearly parallel to it. Here there was also an avenue of sphinxes, and the road passed through four grand propyla, 400 or 500 feet apart from each other. These giant gateways are ornamented with sculptured and polished granite, and on approaching them each exhibits statues in granite, breccia, and basalt, from 25 to 30 feet in height. Among numerous other ruins represented in the Plate, is a temple dedicated to Isis, which stands between the main temple and the gateway, and would be worthy of no little admiration, were it not eclipsed by the superior grandeur and gigantic proportions of its neighbour.

"But," says Hamilton, "without personally inspecting this extraordinary edifice, it is impossible to have any adequate notion of its immense size, or of the prodigious masses of which it consists. In both these respects, and, combined with them, in respect to the beauty and magnificence of its several parts, it is, I should imagine, the most unique in the world."

A wall of solid masonry encloses all the buildings belonging to the temple. The sacred premises on the exterior are encompassed by a ruined wall of sun-burnt brick, a mile and a half across, and presents a chaos of dilapidation, the description of which would fatigue without satisfying the reader.

APPROACH TO THE RUINS AT CARNAC.

Ere entering the solemn precincts of the time-hallowed edifices, it will not be inappropriate to make some observations as to the meaning and design of the symbols with which they are so profusely ornamented, and which, under the general name of hieroglyphics, have long occupied the attention of the learned world. Owing to the labours of Young and Champollion, the subject is now sufficiently intelligible. The characters used by the ancient Egyptians were threefold:—1. Hieroglyphic—2. Hieratic—3. Demotic. The first were composed of images of visible objects; the second of rude and indistinct outlines of the whole or of parts of such images; and the third of a still greater reduction of such outlines in a similar manner. Hieroglyphics, or writing by pictorial representation, is the first resource of human ingenuity, which, as a nation advances in civilization, is improved into a method of expressing sounds by visible signs. This was at a very early period accomplished by the Egyptians in the following way. They selected several common and well-known hieroglyphics, such as immediately suggested some word of frequent occurrence, and they employed them to express the initial sound or first letter of that word: the remaining letters were formed in like manner. The more simple outlines of these hieroglyphics, used in the hieratic character, would therefore have the appearance and perform the functions of letters, and when abbreviated into the demotic encorinal, or running-hand, would lose all resemblance to the original figures. Thus, the hieroglyphic character was gradually rendered capable of expressing sounds, and, consequently, words, without the cumbrous machinery of pictured signs. According to Champollion, these signs are divisible into three classes: 1. Figurative signs, such as were images of the things expressed.—2. Symbolical.—3. Phonetic, or those indicative of sound. The whole number of hieroglyphic characters observed by Champollion, after twenty years' study, was 864, which shews that there were certain limitations to the apparently

APPROACH TO THE RUINS AT CARNAC.

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boundless range of the hieroglyphic draughtsman. The figures were arranged in vertical or horizontal columns. In consequence of these discoveries a great deal of light has been thrown upon Egyptian history and antiquities; the walls of the temples and obelisks, and other monuments, being covered with commemorative inscriptions, the meaning of which is no longer concealed from the modern eye.

It is supposed that the inhabitants of the city made this sacred enclosure, extending a mile across, their last place of refuge when pressed by the Persian conqueror. That they also deposited their idols here, we may infer from the discovery of a number by Belzoni, amidst the ruins marked *E*. They had been, to all appearance, collected and buried for security. Sitting as they do side by side, they give an odd effect to the solitary sanctuary, which is a detached ruin to the right of the approach from Luxor. The next view is taken from the obelisk seen on the left point of view, (marked *O* in the plan,) and includes that part of the great temple at present observable.

Leaving the magnificent portal to the right, I hurried towards the grand propylon. It was with some difficulty I could find my way through the narrow and filthy lanes of the Arab village, from which these ruins take the name of Carnac. All over this spot, and within the limits of the walls, each object denotes the existence of hidden architectural treasure. Here are tops of columns, there overturned statues, and all around are broken relics that court farther investigation. Men of science have been on the ground, and their achievements have been blazoned to the world, but their labours have no more supplied a perfect conception of the extent and design of the ancient structure, than their discoveries in hieroglyphics have unfolded to us the history of Egypt when her cities were in number twenty thousand!





NORTH WEST END OF THE TEMPLE OF CARNAC.

Taken from the Centre of the Ruins.

NORTH-WEST END OF THE TEMPLE OF CARNAC.

For the better enjoyment of effect, the traveller ought to enter the great propylon (marked *B* in the plan) at the western end of the temple, and after he has passed through the court, with its overturned columns, he will find a second propylon, which leads to the noble hall, or portico, already mentioned. On issuing from this he reaches the obelisk (*O*), that towers near the centre of this unequalled scene."

From the neighbourhood of the base of the obelisk the accompanying view was taken. Such is the wilderness of scattered and disjointed fragments, that more than human power would appear to have worked the overthrow of the strong holds of superstition. Some have imagined that the ruin was caused by the instantaneous concussion of an earthquake. None can contemplate, unmoved, a sight that speaks of the downfall of a nation which trusted in "vain gods." While musing on it, some Arabs were procuring relics for the purposes of sale; even the granite obelisk could scarce resist the repeated blows of the sledge-hammer. The twelve columns which stand in the centre of the hall are 36 feet in circumference. Those which form the wings are inferior in altitude, and measure 26 feet round the base.

This hall was formerly roofed, and no light appears to have entered except by the side windows, seen in the Plate. All the building visible, except the obelisk, is of sand-stone, and was covered with finished hieroglyphics, enlivened by vivid colouring. It is difficult to conceive the imposing effect that must have been produced on the mind of the votary by an edifice like this. Having passed through avenues of sphinxes, and surveyed the colossal statues, guarding the enormous propyla, his enthusiasm would be wrought to the highest pitch, and, as he entered the temple, each pillar, while it receded from his view, would present, in brilliant hues, the image of the Deity he came to worship.

The obelisk seen in the foreground has a base 8 feet square, and rises to a height of 80 feet. It is formed of a single block of black granite, and each side has a finely-polished surface. The hieroglyphics, which are beautifully wrought, are supposed to record the succession of Pharaohs who reigned over Egypt. A neighbouring obelisk, of equal magnitude, is similarly ornamented. From the most ancient rulers of the land to the Ptolemies, almost every king, except the Persian, has his name recorded in this temple. But it was said, "The sceptre of Egypt shall depart away;" and, as if in direct fulfilment of the prophecy, the portion of the rocky tables that was to have been occupied by the names of others of its royal line, has been shattered, and by no human hand.

This obelisk, than which there is none more beautiful, has been bestowed by the Pacha of Egypt on the British nation, but no attempt has been made to remove it. It is still keeping its position unheeded in the Desert. The French, more watchful than ourselves, are now transporting similar relics to decorate their capital. Among the finest ornaments of modern Rome are its Egyptian

obelisks. What time can be more favourable than the present to convey to the shores of Britain this masterpiece of antiquity? We know that its removal is practicable, and at an outlay of a tenth of the sum expended on the square blocks of marble in front of Buckingham House.*

It would far exceed the limits of this work to attempt a description of the ornaments of sculpture in this temple. The most interesting are on the north wall, where there are battle-scenes, with innumerable figures of military combatants using their arms, consisting of bows and arrows, spears, and bucklers,—of prostrate enemies, of war-chariots, and horses. The fiery action and elegant shape of the steeds are remarkable. It would require a first-rate living genius to rival the variety of position, the power of effect, and fidelity of execution, in which men and horses are exhibited in the dismay of the flight, the agony of the death-struggle, and the exultation of the triumph. The hero and his principal opponent are distinguished by superior stature. The former is seen at one time in the full career of victory, at another time receiving protection from the gods. On the exterior walls of the south-west corner of the portico are depicted other victories, conjectured to be those of the Egyptians over the Jews.

The obelisks in this temple were the gifts of several monarchs, and various portions of the edifice were constructed at different times by sovereigns, who in this way expressed a sense of obligation to the gods. This may account for rebuilding part of it, and for the appearance of reversed hieroglyphics, perceptible in many buildings, and which may be seen in this temple on the side of the propylon next the grand hall, erected by Osiris, the father of Sesostris. The granite sanctuary was built by Philip, the brother of Alexander the Great, and there is a small chapel erected by the Macedonian conqueror. Hamilton sums up his animated account of the sculpture on these walls by the following remarks:—

"The variety of mounds and situations in these battles is so great, the disposition of the whole, and the expression of each part, are so excellent, that I could not but flatter myself that the same scenes might have arrested Homer's admiration as they did mine; and that, if in his Egyptian tour he ever came to Thebes, he might have caught many ideas and incidents of the Iliad from these sculptures, executed as they are with a fire and animation, to which he could not have been insensible, and which, perhaps, he witnessed in their progress. We here see his Diomede, his Mars, and his Achilles, before our eyes; nor could poetry ever have strewed the plains of the Simois and the Scamander with more varied forms of death."

* I am indebted to an English gentleman, Mr. Burton, for being able to give a correct delineation of the hieroglyphics on this obelisk. I believe he is still pursuing his researches in Egypt, the result of which will, no doubt, at some future day, be laid before the public.

TEMPLE OF CARNAC—NORTH-WEST END.

"It is natural to imagine," says the same writer, "that this temple was founded, and in great part built, by the sovereign of Egypt, whom we so often see represented on the walls in the different characters of a great warrior, a cruel or munificent conqueror, and as a pious prince, grateful to the gods for the benefits they had bestowed upon him. He seems, indeed, to have been considered either by himself, his subjects, or his successors, as a peculiar favorite of heaven. He is frequently on his knees, receiving from Isis and Osiris, together with their blessing, the insignia of royalty and even of divinity. The hawk is always flying above him; two priests are performing upon him the mysterious ceremony of pouring the *cruces ansatas*, or crosses with rings, over his head, at which time he wears a common dress and close cap. Hermes and Osiris are pointing out to him a particular line in a graduated scale, allusive it may be to the periodical inundation of the Nile, or the administration of strict justice, or (combined with the preceding scene) to the ceremony of initiation into the religious mysteries those of the Kings of Egypt who were taken from the class of soldiers. * * * * There is, in general, a great resemblance in the countenance and dress of the monarch in the different sculptures on both sides of the river, the only variety being in the difference of altitude and situation, the different costumes and arms of the enemies he is driving before him, and in his being sometimes with a helmet, at others with his head uncovered and the hair in curls, spreading out at the sides like that of the sphinx or the Bichâre Arabs. * * * Sesotris is the only Egyptian sovereign recorded by Herodotus to have added much to the conquests of his predecessors, as well as to the glory of the two capitals of his country; to have built temples in every city, and to have raised obelisks and statues in the principal ones. Yet it is not probable that only one King of Egypt was a great conqueror; that one only built temples and raised obelisks; and that only one extended his conquests as far as India!"

It is supposed that the gateways and propyla, of which there are still nearly fifty remaining, in different degrees of preservation, formed the hundred gates for which Thebes was famed three thousand years ago, when, according to the poet's lay,

"Two hundred horsemen and two hundred cars
Through each wide portal issued to the wars."

TEMPLE OF CARNAC—NORTH-WEST END.

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The great propylon at the western entrance remains unfinished, and each layer of stones recedes a couple of inches from the row beneath. These enormous structures, like the pyramids, were afterwards brought to a smooth surface, but by a different process; the former, in all probability by means of a chisel. The process of carving was carried on simultaneously.

It was always with regret that I turned my back on these noble memorials when called upon to retrace my steps to Luxor; and during the time I remained in their vicinity I frequently renewed my visits to them. On one occasion I went, alone and unperceived, to the centre of the temple, and casting a wandering glance over the multitude of pillars,—some as if about to fall, others already fallen, others asking support from their neighbours—the soil, impregnated with saltpetre, slowly but surely undermining what violence had left unassailed—I could not help moralizing on the instability of man, and the illusive character of his earthly aims. Even these proud efforts of art, in which durability had so evidently been studied, were crumbling into dust, in the loneliness of barbarian neglect. No living thing was to be seen, save a fox stealing from his hiding-place, or a lizard wooing the sunshine. These were the only watchers near the shrine of the Egyptian deities, and few disturb their vigils, except the passing traveller, or the Arab, who wanders in the sacred recess, and stalls his cattle where the mightiest Pharaoh has bent in reverence.

From the temple the road towards Luxor enters a grove of palm-trees, on passing which the village of Luxor is seen in a S. W. direction, separated by half a league of desert; fragments of sphinxes may be traced over a great part of the road. This intermediate space is supposed to have been the site of the ancient city of Diospolis, and to have been included within the walls of the more ancient Thebes. Centuries elapsed from the time when "the soul of poetry was first breathed into it by Homer," to the existence of the Father of History; and during the intervening period the ravages recorded in sacred writ had been effected. The course that now leads across the plain is obstructed by dikes and mounds of rubbish, with stunted grass, presenting altogether a most melancholy prospect, unanimated by a single dwelling; while, here and there, a hideous idol, like the black minister of a magician, rises on the path, and seems ready to crush the intruder on its solitudes.



They were daubed and decorated, and evidently bold and licentious. They are a peculiar class, resembling the *nautch* girls of India, and reminding one strongly of the performers who shew themselves in front of booths at fairs in England. Having freed myself of this plague, I was persecuted by another. All the beggars of the village and temples seemed to have congregated for the purpose of offering antiques for sale. These were coins and scarabæi, and other ornaments, such as beads, with numerous small figures of vitrified pottery. So little discrimination had these people as to the character of the articles they brought, that pieces of English china left by travellers were presented with the same earnestness as the records of thirty centuries, and the object most prized by them was a discarded corkscrew. Yet discernment and cunning were at the bottom of all this dealing, or it might be intimidation. Gangs of Arabs are frequently met at work, but that part of the produce of their labours worth possessing is only to be bought at Cairo or Alexandria, and for a high price. A traveller is much disappointed in being forced to leave Thebes without obtaining a relic worthy of his research and the occasion. This is likely to be the case, although he is aware many such are at hand, for the trade of ransacking graves and temples is carried on under his eye. But there are always suspicious, reserved-looking personages in attendance on the bands of riflers, and these are agents in the exploring trade. They are easily distinguished by a dress shabby enough, though differing from the loose blue shirt which forms the sole equipment of the *fellaḥ*, who, when in his best plight, wears it clean washed, with a cord fastened round the waist. He may by chance have a scull cap of the same blue colour as his shirt, or his black hair may appear rivalling his dusky skin. It is impossible for a stranger to resist purchasing some of the proffered relics. Many of them, though but an inch in length, bear the image of Osiris; and on some, not larger than a coffee-bean, may be found the figure of a tortoise, or the name of a Pharaoh, till now shrouded within the sacred mansions of the dead. Such things are sold for two or four paras, (a penny or two pence.) When this trade has begun, there is so great a rush of sellers, that all further quiet and unmolested investigation are over. Finding it so, I determined to cross the river, intending to return at a more favorable time. Hearing also that a Frank (a term bestowed on every European) was on the opposite side, I quickened my steps, in the hope of receiving information as to the surrounding mysteries.

On the 1st of January I made hasty arrangements for quitting the east bank of the Nile, and the only boat that plied to the opposite shore was summoned for my accommodation. It held my luggage, with a few attendants, and a well-trained ass that stepped in and out with the alacrity of discipline. On these animals excursions are made to the various temples. The natives prepare them with a pad girthed to the back, for which any old European saddle would be a desirable substitute. We left the bank below Luxor, over which presided a melancholy tranquillity. It was impossible not to call to mind the changes that had occurred since the time when the bosom of the Nile heaved gladsomely under the splendours of the procession. From the very spot I had left, the great idol was embarked in festal pomp suited to the magnificent edifice that enshrined it,

A current, running at the rate of between two and three miles an hour, swept us rapidly down the stream, while the efforts of two boatmen were made in vain to gain the opposite bank. Nor was I surprised at their failing to do so, when I saw the rude materials they had to work with, and inspected the circular pieces of wood which, tied at the end of rude poles, formed a substitute for oars. When we had reached an island that lies between Luxor and the opposite side, the boat was towed up and started again, till at length we had traversed the whole breadth of the river, which may be about a quarter of a mile. When I gained the shore above the village of Gourrou, near a solitary sycamore, the objects that began to arrest my attention came in rapid succession. To the right, near the village, a deep ravine, apparently formed by torrents, like the roads in the Desert of Cosseir, was pointed out as leading to the tombs of the kings. I was passing from the productive soil to the Desert, where low circular hills terminate in bolder features, which are again crowned by a high and rugged mountain, about 1200 feet above the level of the Nile. My road ran westward, over heaps of rubbish and masses of ruins, that constantly forced me to deviate from the direct line. The scene had all the appearance of a vast pile of buildings wrecked by a conflagration. Two giant statues, on the left, seated in the midst of cultivation, next fix the gaze. On turning to the right, the hill appears perforated with openings, some running in regular rows, sufficiently visible to shew that the whole mountain, from its base to the summit, is one great repository of the dead. To the right of the colossi, dividing the sand from the turf, were the remains of that beautiful ruin, the Memnonium; and about half a mile further off, a portion of the temple at Medinah Habou was discernible. Advancing towards these objects, a path suddenly turned to the right, and began to ascend over hollow ground, abounding in pits and mounds of lime and rubbish. Dark recesses, formerly appropriated to sepulture, were now occupied by Arabs, who occasionally started up as our party approached their haunts. Half a mile from the plain, after winding amidst pits, I arrived at the house where I hoped to find a Christian. An approach through a small door admitted me to a yard, well protected by a high wall against surprise. Painted mummy-cases, and other memorials, pointed out the pursuits of its occupant. Ascending to an upper story, I was led to a small room with shattered windows, that afforded an imposing view of all the temples I had visited. Here were tables, chairs, and a comfortable couch, but I looked in vain for the owner. The attendant welcomed me by a look, and retired, respectfully shutting the door. Disappointed in my expected information, owing to the absence of Mr. Janni, the proprietor of the house, I was greatly gratified on perceiving some books. A few works in Greek, and two volumes of Denon, lay upon the table: they professed to give the history of the very spot I stood upon; but, alas! they contained nothing more than a dry nomenclature; the different chapters ringing the changes on high-sounding titles, the names of deities and kings; while all that I longed to learn as to the date or purpose of the construction of the circumjacent monuments, was left unilluminated by aught beyond a vague conjecture,

APPROACH TO THE RUINS AT LUXOR.

(*Vignette.*)

FROM the prostrate idol the attention is called to the towering obelisks of Luxor, rising from an Arab village, which, like Carnac, is a picture of wretchedness in the arms of desolation. A wall, with gates, all of crumbling sand, sun-burnt brick, or mud, surrounds houses of the same description. Through narrow streets I wound my way to a lodging which I rented from an Arab. My residence stood nearly opposite to the magnificent propylon, or gateway, leading to the temple, (see Plate of the Temple of Luxor, a drawing of which from the point marked *A* in the plan forms the vignette to the title-page of this work) which fixes the north-east boundary in advancing from the city. The obelisks that stand in front of the entrance are about 65 feet above the level of the soil, and are each of a single piece of red granite, carved with deeply-wrought hieroglyphics.

These are the obelisks at present on their way to France, where they will afford a triumph to the activity of the "grand nation." It is to be observed that these monuments, with all that is seen in the sketch, were buried in the soil to the depth of more than 25 feet: the hieroglyphics, with which they are inscribed, are of a smaller kind than those on the obelisk at Carnac.

Between these obelisks and the propylon are two colossal statues, also of granite; they have sufficient ornamented work remaining to shew the pains that must have been bestowed on them, but they are so disfigured in front, that it is impossible to distinguish even their size. Though buried in rubbish nearly to the shoulders, upwards of 20 feet, measuring to the top of the mitre, continues exposed to the eye. They are 11 feet across the shoulders, and the length of their ears is 22 inches. Other figures similar to them are visible, and some lie buried amidst the Arab huts along the front. The magnitude of these objects harmonizes with the splendour of the propylon seen in the back ground. The entrance through the centre is 20 feet wide. Fragments of stone shew where there was formerly a covered gate, and here on each side the wall extends about 90 feet, and is 57 feet high. On it are represented a battle-scene, forming one magnificent piece of sculpture, in which there are not less than 1500 human figures, 500 of which are on foot, the rest in chariots. As in the East at the present day, there are no rules of perspective observed. The spirit and variety of this picture cannot be described; it is supposed to record the victories of the Egyptians over Eastern enemies.

I strolled through the temple, and was delighted with every part. Its original size and form cannot be doubted, although several masses of stone and many fragments of pillars indicate that much of the minor compartments and decorations has been destroyed. It has been altogether unroofed, except the enclosed building opposite the entrance that led from the city. There is a simplicity about every part of the structure that shews its extreme antiquity, and it exhibits the two original styles of Egyptian architecture. We are not here diverted by the multiplicity of additions and

detached buildings that confuse Carnac. Luxor conveys to the mind a perfect and natural outline, and I returned to my abode highly gratified, determined to make such plans and representations as would satisfy myself, and enable me to convey to my friends the means of forming a conception of the antiquity, resources, and power of a departed people. Of these monuments

" Some felt the silent stroke of mouldering age,
Some hostile fury, some religious rage;
Barbarian blindness, Christian zeal conspire,
And Papal piety, and gothic fire."

I retired to my humble quarters, where I found some fish had been procured and cooked. I thought them insipid, and probably the natives esteem them but little, for I saw very few during my journey; the many beds of water that have been dried up have, no doubt, altered the character of Egypt in this respect. My apartment was the principal room of one of the best houses in Luxor; a door opened into it from the public street. A raised platform three feet from the ground ran across the opposite side of the room to the door. This was the breadth of half the apartment, which might have been twelve feet square. The mode of raising a part of the room above the rest, prevails throughout the East, and the approach to the elevated part is the characteristic of rank. My carpet was spread, and I was told that the sheik of the village was about to pay me a visit. He soon entered, bearing his pipe, with its long cherry-stick and clay bowl. The mouth piece, which is seen of every description and value, from the common piece of stone to the amber set in diamonds, denotes the rank of the possessor. Every man carries his own bag of tobacco, and after the first salutation, all the parties sit cross-legged, and smile at each other, puffing simultaneously. Very few questions are introduced by these intellectual people, who have, however, one very sensible custom, that of presenting coffee as a signal for the guest to take leave, when there is an understanding that you are tired of his company. On this occasion it would have been well had I retained my silent visitor, for he had no sooner turned his back than a loud noise and merriment announced the approach of a group of *almehs*, or professional singers and dancing women. I shut the door of my house to exclude them, although I was left in total darkness; but they were not to be thus defeated, and remained outside, uttering shrieks that were more intolerable than the exhibition was likely to be. I was also told by my attendant that they were privileged, and the best way would be to fee them at once.

The group of dancing girls consisted of four: the dance resembled a Scotch reel, except that the couples "set" to each other, and seldom change places. Pieces of metal were attached to the finger and thumb of each of the girls, making a great noise, and they accompanied the dance with a scream, which vied in shrillness with a kind of flageolet played by a man who attended the party.



RUINS OF THE MEMNONIUM.

with Part of the Cemetery of Thebes

RUINS OF THE MEMNONIUM.

EARLY the following morning I explored the Ruins of the Memnonium at the foot of the hill, below my abode. Not a hut was nigh, and not a living being interrupted my occupation. Every wall displayed a picture perfect in itself, and commemorative of events in character with the time of execution.

Mr. Hamilton's vivid description of one of these paintings will supply an idea of the whole. "In one of the battle-scenes on a gateway, the Egyptians are led on by two heroes of equal prowess, and whose weapons spread equal destruction and dismay among their long-robed opponents. Here, too, is introduced the reluctant retreat of the defeated chieftain, till he is laid low by the fated arrow of the conqueror. In the next scene, where is represented the plunder of the conquered town, much art and ingenuity have been exerted in the different details of murders, battles, and scenes of pillage. The insatiable myrmidons, tired with slaughter, in entering the houses, lay hands on the money-bags, open the wine-casks, and are wallowing in the juices that flow around them. Some are loading camels with what they think worth carrying off. The superfluous beasts of burthen are put to death; the inhabitants are surprised at their daily labour,—some bruising corn, others carrying burthens, or tending their cattle. The oxen have the Indian bunches on their shoulders. War-chariots and other carriages serve to block up the streets: some of the greedy conquerors are contending among themselves for objects of value; others are throwing the helpless inhabitants over the walls. The remaining troops are marching, in order to lay themselves at the feet of the conqueror; their arms are scimitars and shields; captives are driven or led through the streets, with their elbows lashed together above their heads; and their monarch is tied to the conqueror's chariot, to be dragged, like another Hector, round the walls of the town."

The sides of all the cross walls in this temple, of which there are several remaining, and the propylon, are covered with equally interesting representations. Among the varied scenes, is one in which a chieftain is depicted in a sitting posture, with a tree rising between his knees. The branches and foliage throw a circle of shade above him. He grasps the *tau* and sceptre. The Goddess Isis, and two other deities, have inscribed the name of the hero on the fruit of the tree; one of the scribes has not completed the writing. The same name runs throughout the devices in the temple.

Within these walls, which occupy a breadth of more than 200 feet, with a depth of 600, the whole area is a forest of pillars, interspersed with fragments and fallen statues. It was approached through a noble propylon, which fronts the fertile plain, and rests upon it. But the ancient inhabitants, whose enormous temples extended over so great a space, were obliged to choose the desert for their purpose; and we find the remainder of this temple on the under feature of the mountain, the rock of which is levelled to form the floor. The pile of stone, which forms the approach has some

inverted hieroglyphics and unfinished sculpture, a proof of its being more modern than some other structures. It is much shaken and changed in form.

In this propylon, like that at Carnac, there are passages leading to several chambers and to the roof. A distance of 160 feet separates the propylon from the first wall of the temple. The enormous statue, of which the fragments remain in the court, is that commonly denominated the Memnon, a name which it contests with the statue seated in the plain. Its fragments, which are rocks of large grained-red granite, have a beautiful polish on the exterior, and the shoulder is ornamented with deeply-cut hieroglyphics. How such a block of granite could be shattered, must excite the surprise of every beholder. Its condition, and that of the propylon, can only, I think, be satisfactorily accounted for, by attributing it to the concussion of an earthquake.

This statue measures 22 feet across the shoulders. From the crown of the head to the top of the shoulder it measures 13 feet; from the shoulder to the elbow 13½ feet, and 6 feet 10 inches over the foot. It lies on its back, and much pains must have been taken to reduce the features of its face to a smooth surface. Champollion dates its erection at 2272, B. C. It was from its summit that I took the view of the temple: it is ascended by means of the hieroglyphics on the arm. The court, which intervened between me and the opposite quarter, is about 100 feet wide. Four square columns, similar to those in front, formerly stood on the opposite side of the door, making a row of eight, that faced a like number, some of which were yet to be seen on the division where I was stationed. The two sides of the court were bounded by a double row of enormous pillars, parts of whose capitals remain, and have a circumference of 32 feet. Behind the square columns are others, and when the whole was roofed, it must have formed a magnificent piazza. The front of the square columns is carved into statues in full relief, measuring 20 feet to the shoulder, and Osiris is represented with his hands crossed, holding the crook and scourge. Much labour has been spent in divesting the figures of the heads and pointed caps, which, if un mutilated, would raise them to the top of the pillar. Below the arms they take the shape of the mummy-case, and they have a row of hieroglyphics down the front. From these figures, the Greeks are said to have copied their Caryatides. On the fragment of the wall seen in front are representations of offerings to the deity, but they by no means exhibit the spirit and animation displayed in the battle-scenes. The pillars form the central ruins of a hall, whose roof is supported by forty-eight pillars; beyond this is a second hall entered by a door and divided from the other by a cross wall. The remains of a third, seen farther on, terminate this interesting ruin. The whole of the chambers are roofed, and the central part is elevated, and admits light as at the temple at Carnac. All the interior, which was at one time coloured, is filled with sculptured heads. The side walls that enclose this temple, have been removed, as have

many columns and statues, but enough remains to awaken a high degree of awe and admiration in the mind of him who winds his way through this once venerated pile. It differs from all the other structures of a similar class, in being without a sanctuary. The statues that once adorned it have been much mutilated. The fragments of a statue of black granite, represented in the plate of the Memnonium, is styled the brother of the Younger Memnon—the figure whose head was conveyed from hence to England by Belzoni, and placed in the British Museum. Like its expatriated companion, it has a benignant countenance, and the full Ethiopian lip, which characterise the sphinxes in the neighbourhood. Belzoni, speaking of his Memnon, says, “I found it near the remains of its body and chair, with the face upwards, and apparently smiling on me at the thoughts of being taken to England.” The hills beyond the ruin form part of the range, which are excavated and filled with tombs. Adjacent to the temple these hills are penetrated by many curious tunnels, extending to a length of several hundred feet, and having their roofs supported by parallel arches of brick. The use of these passages is unknown. Large heaps of unburnt brick, apparently collected for building, are found in the vicinity. On all sides, looking up the hill, the eye sees nothing but the decaying vestiges of the temple and the tomb—of the abodes of the living and the dead. Man or mummy might at present find a suitable tenement in these rocky recesses.

Belzoni, who fully explored this range of tombs, says, “After the exertion of entering into such a place, through a passage of 50, 100, 300, or perhaps 600 yards, nearly overcome, I sought a resting-place, found one, and continued to sit: but when my weight bore on the body of an Egyptian, it crushed it like a band-box; I naturally had recourse to my hands to support my weight, but they found no better support, so that I sank altogether among the broken mummies, with a crush of bones, rags, and wooden cases, which raised such a dust as kept me motionless for a quarter of an hour, waiting till it subsided again.”

The Memnonium seems to correspond with the tomb of Osymandyas, described by Diodorus, if we suppose the library—“the repository of the medicine of the soul”—with some of the rooms about it, to be buried in the rubbish at the west end of the ruin. It is worthy of remark, that this temple, like its neighbour at Medinah Habou, is without an obelisk, and the same distinction is observable in all the temples on the west side of Thebes, while no tomb is found on the opposite shore. That this building was appropriated as the mausoleum of some distinguished individual is the more probable, from the single statue that adorns it, of the enormous proportions described. In its sitting posture, it measured 52 feet, without including the head dress or the pedestal. The latter, from the part still visible, appears to have been wrought with hieroglyphics. Some idea of this gigantic

figure will be conveyed to those who see the younger Memnon in the British Museum, which, in its perfect state, would have measured less than half the size of this one. Its ear forms a most comfortable resting-place for weary travellers. The toe nail is larger than the foot of most statutes of the present day. An idea of the appearance of this colossal figure in its perfect state, may be formed by referring to the succeeding Plate, in which two figures are represented, unrivalled for their size. But the statue of Osymandyas is described by ancient writers to have been the largest in the country, and this prostrate one must have surpassed its neighbours when seated in its majesty, and ornamented with a head-dress. It is also said of the same statue, that it stood within the walls of the tomb or temple. Now this is the case at present with that under consideration. It remains for some enterprising traveller to determine this long agitated question, by uncovering and decyphering the hieroglyphics which lie beneath the rubbish, and correspond with similar records inscribed on the pedestals of the adjacent statues. If this should prove to be the supposed statue; we are told that the following singular announcement will be found to attest the fact: “I am Osymandyas, king of kings; if any one desire to know what a prince I am, and where I lie, let him excel my exploits.”

The dark age of ignorance and fanaticism that has so long enveloped the land of Egypt is fast clearing away; and this country is every year becoming more the resort of European and of enlightened travellers. Already have the indefatigable researches of Young and Champollion thrown a light on the obscurity of Egyptian history, they have pointed the way to the attainment of much valuable knowledge. The names and dates of the reigns of many Pharoahs have been decyphered, and with the assistance of picture writing, found on all the temples and tombs, much has already been done to illustrate the works of profane writers, and to illumine the pages of holy writ. Those two eminent labourers in the field of mystical inquiry have terminated their earthly career. Others among the learned are engaged in the interpretation of hieroglyphic characters. It must be encouraging to reflect that it is not yet a century since the Danish traveller, Norden, visited the monuments in Egypt, when the devices on them were regarded as fancy compositions, meant to embellish the surfaces on which they were found. Many volumes on hieroglyphics have of late years been put forth, each making an advance beyond its predecessor towards the attainment of the desired knowledge. Throughout Europe a spirit of national emulation has arisen, and increased, to take the lead in elucidating the ancient and venerated memorials of the past.

Turning my back on this gem of antiquity, I became suddenly involved among drains that intersected the level and cultivated plain below, all of which is irrigated on the rising of the river. After advancing about eight hundred yards, I reached the Colossal Statues.





COLOSSAL STATUES at THEBES and distant View of MEDINAH HABOU.

taken from the East

Under the direction of G. E. K. Smith, Esq., F.R.A.S.

COLOSSAL STATUES AT THEBES.

No object is approached with greater veneration than these kindred genii of an enchanted region. At one season of the year they are seen like distant spires, rising from the bosom of green fertility; at another, they are observed, like beacon-towers, emerging from a sea, and casting their shadows on the waters which overflow the surrounding country. They are distant about a mile and half from the Nile, equi-distant from the Memnonium and the temple of Medinah Habou, to the latter of which they probably marked the approach. They are sixty feet asunder, and look towards the East. Nothing certain is known as to the sex of either, but there is a perceptible difference in their size, and it may be inferred that the smaller was intended to represent a female. This figure has been more kindly dealt with than its neighbour, which, some historians say, by the violence of Cambyses, and others, by the shock of an earthquake, was broken at the waist, whence its altitude is now ecked out by layers of sand-stone. Not a trace exists of their features, but there is enough of elaborate work on the drapery and costume of the smaller, to shew that these colossi were master-pieces of art as well as of mechanical power. Each was formed of a single piece of crystallized quartzy sand-stone. A considerable part of the pedestals lies buried in the soil which has accumulated about them; and if, as writers allege, the soil increases at the rate of one foot in every hundred years; and if Champollion's conjecture be correct, that the hieroglyphic inscription on the throne denotes the figure to be that of the seventh King of the eighteenth dynasty, (the Memnon of the Greeks,) who reigned 1800 years before our Saviour, these statues must have been elevated to an enormous height. At present the pedestals rise eight feet above the soil, having a front of eighteen and a depth of thirty-six feet. A cube of eighteen feet forms the seat. The whole height of the figures above the plain is about fifty-two feet, and the height of the knee from the pedestal is nineteen. The front is relieved by three figures, one outside each leg, with pendant arms and spiked head-dresses. A small figure as high as the calf, stands between the legs. The sides of the pedestal are embellished with hieroglyphics, and the sides of the seats are marked with devices, supposed to be emblematic of the Nile. These are figures represented in the act of binding bundles of the lotus to the post of a table, on which are supported hieroglyphic tablets. They wear head-dresses of the lotus flowers, half of which are blowing and half are just budded, supposed to typify Upper and Lower Egypt, provinces that were probably united under the reigning monarch. Similar devices are to be seen at the doors of the temples, and are placed on the north and south side, to correspond with the bearing of these localities. The legs and instep, and many parts of the broken statue, are covered with inscriptions in Greek and Latin, testifying the truth of the well-known story, that the lips of the sculptured Memnon uttered a mysterious sound every morning at sun rise. Among the names of persons recorded as having witnessed it, are those of the Emperor Hadrian and his

consort Sabina, with many others of rank and title. The boldness and originality of the works of the Egyptian sculptors astonish the beholder, and their size and uniformity hide many defects that would prove repugnant to taste, if the scale of execution were less grand. The circumstance of the elbow being brought in contact with the thigh in the twin colossal figures, while the hand is made to extend to the knee, will shew the applicability of the remark.

Between the statues the outline of the temple at Medinah Habou appears broken by an Arab village, which partially rests on its roof. This village is deserted, and its crumbling mud walls, compared to the massive and firm structure below, strongly mark the fallen condition of the present occupants of Thebes. Most of the Arabs prefer a residence in the excavations which are visible in the projecting mountain. These are mummy caves, from which the silent tenants have been ejected to make room for a living generation. They are opened in spots where the lime-stone favours excavation; and here it is cut like the front of a wall, with entrances frequently as regular in appearance as rows of windows. Few of the caves communicate with each other; the bodies of the poorer class are found in the most accessible places, at the base of the hill, and, though embalmed, the cloth is of an inferior quality, and they are generally without the wooden cases. In the vicinity of the statues are fragments and ruins, indicating that other objects once stood between them and the temple. An excavation has lately been made in the direction of the mount just at the edge of cultivation, from which were removed two beautiful sphinxes, that measured above the pedestal sixteen feet in length; from the top of the pedestal to the chin was five feet, and the head, a soft and pleasing face of a female, was three feet; all, including a pedestal, being formed of a piece of beautifully polished red granite. A sugar-loaf cap of a separate piece measured five feet more. If, by mere chance, and by the exertion of an humble individual, these treasures of art were discovered, how valuable must be the monuments that lie buried and lost to the world in the vicinity of the temples. My Arab servant having spread a carpet, and arranged my humble fare in front of the Memnon, I took my repast beneath his protecting shadow. Often did I think of the novelty of the situation, while I gazed at the placid survivor of so many revolutions, which were calendered by the marks of violence that disfigured his majestic frame.

In surveying the giant forms before me, my feelings fully responded to the sentiments of a recent traveller, (the author of *Scenes and Impressions in Egypt*,) who says, "These are very awful monuments: they bear the form of man; and there is a something in their very posture which touches the soul; they sit erect and calm; they have seen generation upon generation swept away, and still their gaze is fixed on men toiling and perishing at their feet."

"Few monuments of ancient magnificence," says Hamilton, "have as yet given more subject

for discussion among the Egyptian antiquaries, than the identification of the statue of Memnon, or rather of that statue from which was said to proceed a certain mysterious sound every morning at sunrise. This contest has arisen from the contradictory accounts given of it by the geographers, natural historians, and poets of antiquity. The French have adopted the opinion of those who claim this appellation for the fallen colossus at the temple they call the Memnonium. Pococke, on the other hand, and I am inclined to prefer the opinion of our countryman, gives it decidedly in favour of the northernmost of the two last mentioned. Strabo simply says, that on the opposite bank of the river, where was the Memnonium, there were also two colossal statues, each of one stone, and near each other, of one of which the upper part had been broken off, it was said, by an earthquake; and that from the part which remained on the throne or base, a sound issued every day resembling that of a slight blow. Now the two statues in question are but fifty-four feet asunder, they face the same point of the compass, they are very similar in size, character, and proportions, one of them, that to the south, is certainly of a single block of stone, and the northernmost has evidently been broken off at the waist; and while the lower part is a monolith, the body, arms, and head are constructed of several horizontal layers of stone, apparently of a different kind from the legs and base."

After citing the opinion of Pausanias and other ancient authorities, the same traveller says, "In addition to these testimonies, which seem in the whole in favour of Pococke, we have those of the various Greeks and Romans who visited this statue at different times, and have engraven their names on its legs and feet, declaring that they heard the sound or voice of Memnon at such an hour, generally either one or two hours after sunrise, and it cannot be supposed that they should hear the sound come from one statue, and commemorate the circumstance at another.

"With regard to the Memnon and his history, all that is said upon the subject is so full of contradiction, conjecture, and fable, that it is impossible to argue about the place of his residence, while we are ignorant of that of his birth, of his country, and of his life. He is, at different times, and in different authors, an Egyptian, an Ethiopian, a Trojan, and a Persian. He appears to have been the universal hero of the south, as Hercules was of the west, and Bacchus of the east. After all I have said on the subject of the statue of Memnon, I am very much inclined to think that there were two pretended vocal statues at Thebes; and that the one which Philostratus speaks of as having, besides its youthful appearance and other circumstances, a peculiar intelligence in its eyes, and a mouth as if on the point of speaking, was placed in the temple called the Memnonium. The head of such a statue is still to be seen within this building, and it is certainly the most beautiful and perfect piece of Egyptian sculpture that can be seen throughout the whole country.

We were struck with its extraordinary delicacy, the very uncommon expression visible in its features, and with a marked character that well entitled it to the admiration of Damis. Its proportions are not so colossal as those of the two which are together in the plain, and the place in which it is to be found exactly answers to the description by the same biographer,—a space within a ruined temple, strewed with fragments of columns, traces of walls, pedestals, doorways, and statues of Hermes; *Partim manu, partim tempore consumpta.*"

The French, who were some time the undisturbed occupiers of this territory, made various efforts to elucidate the history of the country by experiments to ascertain the quantity of soil deposited at different places, and by that means to form a species of chronometer by which the number of centuries since the erection of different monuments might be determined. The results drawn from this project form but a vague approximation to the truth. The depth of soil is found to vary at different distances from the river, lessening from the banks until it intermixes with and becomes lost in the desert. Herodotus, who 2000 years ago entered into the same speculations regarding the early history of Egypt as travellers in the present day, asserts that, in the reign of Moeris, Egypt only required that the river should rise to the height of eight cubits to water the soil. The reign of Moeris has been fixed at 1300 centuries before the time of our Saviour, and from this period to the age of Herodotus was about 900 years. The Greek historian also mentions that in his time the river rose to the height of fifteen or sixteen cubits to cover the country. The additional seven cubits, or 126 inches, that the bank had raised in nine centuries, formed a scale of fourteen inches for every hundred years, by which to measure the age of the Egyptian monuments. It must be evident, that this method, however ingenious, cannot be applied with correctness unless the original site of the objects was ascertained. No satisfactory conclusion, therefore, has been drawn, although we know that the river goes on increasing in height to overflow the land, thereby affording an extraordinary example of the benefits afforded by it, and showing how appropriately Egypt has well been termed the "gift of the Nile." These twin statues are familiarly called Shammy and Tammy by the Arabs, who make many ridiculous grimaces on approaching them, treating the old monarch of the plain with little respect; they are ready to climb their knees, or pull their ears, for a trifling reward. They appear like monkeys crawling about the limbs of these stately giants.

Delighted with the result of my day's research, I retraced my steps through the Memnonium to re-enter my residence amidst the habitations of the dead. Early on the morrow torches were prepared by my attendants, my ass was saddled, and I started at a brisk pace in the direction of Baban-el-Maluk, or the Tomb of the Kings.





APPROXIMATELY to the TOWER of the KING'S at THEBES.

APPROACH TO THE TOMBS OF THE KINGS AT THEBES.

THE road to the tombs runs from the neighbourhood of the village of Gournou directly into the mountain. It has now the appearance of a deep ravine, or water-course, narrow and high, with many loose stones and fragments of rocks. It is winding and uneven, and would seem to be a chance passage to these mansions of departed sovereignty. There is a gradual but constant ascent from the gorge of the ravine for three half miles, when it terminates in a semi-circle, with a heap of rubbish in the centre. The sides of the hill are cut into a perpendicular wall, and on every hand are seen square openings, which prove to be entrances to the tombs. The height of the rock is from eighty to one hundred feet. It is of a calcareous quality, hardening and becoming more compact as it recedes from the surface. In the most firm and suitable places shafts are carried directly into the hill, sometimes horizontally, at other times with a downward slope to get a firmer stratum before fixing the doorway. Many are thus concealed from the spectator on the opposite side of the area, while the heaps of rubbish conceal others. Ancient historians allege that there were forty or forty-seven of these tombs, and there is no reason to doubt the information. A few years ago there were but eleven known to the world. Belzoni, by his success in discovering in this valley the splendid tomb of which he exhibited a model in London, set an example that has been followed by other enterprising individuals, and at present eighteen are open to invite the attention of the traveller. Much time having been lost, and disappointment felt by not being aware of those which are worthiest of notice, the tombs are now numbered. The seventeenth is Belzoni's, remarkable for its freshness and extent, but it is perishing fast, the sledge hammer is used without mercy, and the brittle nature of the stones yields but too readily to the rude shock. The few years of its exposure to man has injured it more than the previous wear and tear of many centuries. The eleventh is Bruce's, meriting respect out of justice to the memory of an injured traveller. It continues to attest the veracity of the Briton, and the extent of his research. The sixth and ninth are allowed to be the next in order that deserve inspection, and if the traveller do not become tired of pacing passages some hundred feet in length, the fourteenth and fifteenth are likely to repay his curiosity.

Immediately before entering Bruce's tomb, are two heads of oxen on each side, in high relief. The rock is then squared, and has an entrance about seven feet across, and ten high; the top is surmounted by an oval, containing on it a scarabæus and a wolf-headed deity. Kneeling figures on each side the oval, with their hands in attitude of supplication, complete the group. Hieroglyphics fill the sides of the door, and a succession of them, intermixed with figures and devices, continue throughout the whole exterior of these recesses. Belzoni and others have attempted to connect the meaning of all they saw, and to detail the life and history of some monarch to whom these tombs are supposed to refer. Such efforts are like the conclusions formed in a dream, and are

founded on no better basis. They form an amusing history, to be changed and embellished, or totally refuted by the next hypothetical visitor. That these are tombs of some kind there appears little doubt,—the sarcophagus denotes it,—but it is possible they were called the tombs of Kings from the monarch who formed them. It was probably here that the bulls without blemish were sacrificed, as Herodotus informs us, was the custom of the Egyptians. The only skeleton found in the tomb opened by Belzoni, was that of a bull, and, in the same tomb, there is a representation of one under the sacrificial knife. A recent traveller, who has entered largely into detail on the imagery found in the tombs, remarks,—“We had been told that what we saw was a tomb, but it required a constant effort of the mind to convince us that it was such. Only one sarcophagus in one chamber, and twelve chambers, exclusive of the long corridor, all highly ornamented for nothing! It may have been a subterraneous temple, resembling the religious creed of the worshippers, or the rites of the initiation: it may have been a subterraneous palace. But never was there such a superfluous waste, if we are to suppose all this was done for the reception of one sarcophagus.” No one has entered more accurately into detail than the author now cited, (Dr. Richardson,) but it is beyond the reach of the present age, as it was of the ancients, to discover the uses of these mysterious chambers, where deeds “were done in the dark.”

The following passage in the Scriptures evidently refers to monuments of this description, which the Israelites had borrowed from the Egyptians. “Then said he unto me, Son of man, dig now in the wall; and when I had digged in the wall, behold a door: and he said unto me, Go in, and behold the wicked abominations that they do here. So I went in and saw and beheld every form of creeping thing, and abominable beasts, and all the idols of the house of Israel, pourtrayed upon the wall round about.”

Entering the door leading to Bruce's tomb, a passage six feet wide and fourteen high, inclines downwards thirty feet, when a chamber twelve feet square is found on each side. Passing the doors of these chambers, and advancing twenty-four feet, four chambers appear on each side of the passage. They are but six feet square, and one of them is the “harper's” room. About twenty feet beyond these chambers the passage enters the corner of a chamber, fifteen feet by twenty-one; at the opposite corner a door leads to a passage double the width of the first, and upwards of fifty feet in length. Here there is a chamber forty-eight feet long, with pillars and galleries on each side; the floor is lower than the level of the galleries and passage. Another gallery, thirty feet long and nine wide, leads into a chamber eighteen feet square, when there is a second chamber of the same size, separated by a wall. From this, four steps lead into a chamber sixty-four feet square, including galleries supported by four pillars on each side, the height of which is fourteen feet; the roof of

this apartment is elliptical, the ceiling painted blue, with numerous stars, and there are two chambers detached from it, each twelve feet square. Four steps lead to an apartment nine feet square; beyond it is another of the same dimensions, and this is terminated by a third, the last chamber of the excavation, which is thirty-six feet in length, and has three recesses on each side. All these galleries and chambers abound in figures and hieroglyphics, the colouring of which is as fresh as if it had been recently applied. Groups and processions represent domestic occupations and religious ceremonies. Each tomb contains a portion of a sarcophagus, or displays a burial pit sunk in the rock. The figures are cut, as in intaglio; the colourings are primitive, and have been laid on in broad masses. No attempt has been made at shading, but great labour has been bestowed in working up the same subjects with different colours. The whole length of this tomb is about four hundred feet. There are representations of decapitated figures and scenes of vengeance, with a profuse intermixture of serpents. All that has heretofore been seen wears an air of doubt and uncertainty that excites wonder without delight, but on getting to the end of Belzoni's tomb, the toils and purposes of man become apparent. The coloured chambers terminate, and others follow apparently finished by the chissel, but unembellished by the mystic devices of antique art. In one of these chambers there is a design chalked in red, which is perfect, and indicative of a bold hand. Few of the strokes are corrected: they run smoothly throughout, but the master's touch had not been applied. In another chamber the same red outline was conspicuous, and touches and corrections with black chalk had been added, that produced life and effect, which made manifest the supervision of a higher order of genius. The rough hewn stone, splintered and unfit for use, is seen in another chamber. Walls also were in course of preparation for the artists. The flaws had been filled with mortar, and the surface, smoothed and white-washed, was in readiness for the pencil. In these chambers the observer feels riveted to the spot, as if he longed to continue the work, and hoped to catch the ideas that had directed the artist. The profile of the human countenance, however slightly sketched, is remarkably impressive. Much attention was given to the formation of the eye, which is always of a large size in Egyptian figures. No one visits this repository of historic records without sympathising in its rapid destruction. Monarchs are struck down in your presence, for it is a trade with the merciless Arabs to fell all that comes in their way, and square feet are demolished to obtain an inch as a specimen. It is from such a country that we hear persons bewailing the removal of ancient monuments, which, in fact, affords the only chance of accomplishing their preservation.

Many accurate drawings of the interior of this interesting tomb were brought to England by Belzoni, when he exhibited his model of it. Dr. Young decyphered from those devices the names of

Pharaoh Necho, and of his son Psammis who succeeded him. This gives it an age of about 2500 years. In the same century that Psammis died we find that Cyrus conquered Egypt; and this circumstance may well account for the non-completion of the work, which, in all probability, was meant to commemorate many more descendants of the same family. Not only may this be inferred from the limited number of regal tombs, but also from the number of chambers (in this are 14); nor is the idea unreasonable, when we are told by Richardson that 1000 bodies were found in a single mummy-pit in this mountain, "laid in a horizontal posture, one above another." In a procession in this tomb there are representations of four nations, in groups of four each. Nor is it difficult to distinguish the long-robed Persian from the black Ethiopian or the bearded Jew; the last group, with kirtles, are no doubt Egyptians, this being their characteristic costume in the battle scenes.

To illustrate this picture, the following points are worthy of remark:—In the 34th chapter of the second book of Chronicles, it is written that the King of Egypt conquered Jerusalem, "and Necho took Jehoahaz (King of Jerusalem) and carried him into Egypt." We are also told by Herodotus that this king conquered the Syrians, and after his victory obtained possession of Cadytis, a Syrian city. "The vest which he wore when he got this victory, he consecrated to Apollo." The same historian says, "After a reign of 17 years, he died, leaving the kingdom to his son Psammis. Psammis reigned but six years; he made an expedition to Ethiopia, and died soon afterwards." It is said of Aprus, the son and successor of Psammis, that he was strangled at Sais, and buried in the tomb of his ancestors near that city. It is very probable that the kings of Egypt had tombs in different parts of their territory.

There is a smell and closeness in the tombs unpleasant to experience, and the discomfort is increased by the smoke and heat from the rude torches of the Arabs. The traveller should be provided with wax candles, which he will have occasion to use soon after entering the shaft of the tombs. For effect and for comfort, the visit to the tombs should be undertaken at night; and it is desirable to view the bold outline of the temples at the same time. The extent and grandeur of the architecture then make their full impression, while the fractures and defects produced by time are concealed, and there is less risk of encountering interruption.

The entrances to the different tombs are, as represented in the Plate, at irregular distances, and without regard to position in different parts of the semi-circle. The tomb in which Champollion resided is pointed out; some rows of partition remained standing when I visited it, and, save for the close and unpleasant atmosphere, it was not an unsuitable place of domicile.

I returned to my abode completely tired with the exertions of the day, and looked forward with anxiety for the morrow to enable me to reach the Temple of Medinah Habou.





PART of the INTERIOR of the TEMPLE of MEDINET HABU.

INTERIOR OF THE TEMPLE OF MEDINAH HABOU.

THE approach to this temple runs behind the propylon of the Memnonium. The road skirts the plain and on the right passes numerous monuments and piles of rubbish. The base of the mountain which lies beyond, is a wilderness altogether destitute of cultivation; it was made the receptacle for the dead of the city.

The temple at Medinah Habou is greatly encumbered with rubbish, and parts of it are completely concealed; the revolutions that have taken place in its vicinity have occasioned town to be built on town, till a bank of ruins has been raised higher than the temple itself. The building is open towards the plain, and this end is supposed to have been a palace, with a chapel in its vicinity. There is a confusion of apartments, with numerous emblems and hieroglyphics; but what most strikes the observer are columns of quite a different fashion from any seen in the other temples. They do not exhibit the simplicity of ancient Egyptian architecture. From this and other appearances, it is supposed that Medinah Habou was erected at a later period than several of the temples at Thebes.

About 300 feet from the back of the above-mentioned building or palace, there is a propylon 160 feet across, 30 broad, and 60 high. The passage through the centre opens on a court 120 feet square, flanked by piazzas. The whole exterior of this court is richly adorned with sculpture. There are eight columns on each side, whose effect and beauty are entirely concealed by accumulations of sand and erections of mud. A door-way leads from the central court into a second, which is surrounded by a piazza. Beyond this court the pronaos is buried in heaps of rubbish, the remains of Saracenic buildings. The ruins include about a mile in circumference. The view in the Plate represents the N. W. corner of the second court; the whole was enclosed by a massive wall, having five columns at each end, and a double row of eight columns at each side, supporting the piazza.

At the north end of the court the central column has been cast down, and in its place there are the remains of a Christian church, the nave of which was supported by moderate sized pillars, a few of which are seen in the middle of the court, marking the art and power of the two ages. "Poor and humble do they look in the midst of such ruins as these: but to the Christian eye they are arrayed with glory." They are unpretending, and shew the character of the early Christians, by whom they were designed. These little columns, 17 feet high, are distinguished by their Grecian capitals; they have a diameter of 30 inches. The square columns on either side the court were fronted with caryatides in high relief, as seen in the view of the Memnonium. The whole of the interior of this court, including walls and pillars, is filled with spirited carving and hieroglyphics, beautifully coloured. The roof of the ceiling is of a brilliant azure, studded with stars. On one compartment of the wall there is a procession, where a figure is borne in a sacred litter; banners are floating; and

scribes in front are making a ceremonial announcement from a book. The car is attended by the sacred vulture, with outstretched wings, holding a ring in its talons. Numerous hieroglyphics are interspersed on all parts of the wall amidst the figures in the different ceremonies. All the walls of the temple are covered with representations of deities and heroes, processions and offerings, victors and sufferers. The figures and hieroglyphics were coloured, and must have produced a dazzling effect.

In the early ages of Christianity there was a considerable church establishment and two bishopricks at Thebes, and there is every reason to conclude that this was the capital of the western diocese. Without the walls of this temple there are many pieces of fine sculpture, that vie with any in the other temples, though there is little unshrouded by rubbish, except the north wall, or that facing the Memnon, where the ornaments are of the most animated character.

Having completed my examination of the larger temples, I pursued my way amongst the hills, to explore some of the private sepulchres. Several of these are as large, and contain as many apartments as are found in the tombs of the kings. One, said to be that of a scribe, is of an extraordinary size, and has beautifully executed astronomical devices. These tombs are of all sizes, and pourtray every description of occupation and ceremony apparently in correspondence with the rank and character of the proprietors. From forty to sixty of these excavations are often found in a line, and, where the rock is favourable, several rows are visible.

The rock, which is of a white and brittle lime-stone, takes a fine polish, and is well suited to the purposes which it served. There is a brisk trade carried on in lime-stone which can be obtained here easier than at quarries, and the columns from the tombs are disappearing much faster than they were formed. Boat loads of the tombs, with gods and heroes, are shipped on the Nile to supply the demand for lime. In forming the excavations where the stone suits, the hill has been squared and pierced, and sometimes a large area has been sunk and forms an approach; generally the rock is cut into a piazza in front of the tombs, which adds to the fitness of these recesses as dwelling-places for the Arabs, who, however, take but little pains to benefit by the convenience the excavations would afford. A mud wall, built across the entrance or in the corner of a piazza, best suits their inclination, and the cerements or skeletons of the dead are allowed to remain, or are cast aside without further consideration.

These tombs are entered with lights, and there is considerable danger unless the traveller is provided with a lantern. One that I examined of an immense size was said to be that of a royal scribe; its galleries and ranges of apartments were remarkably well cut. In the wall there was a lateral opening at the depth of 30 feet, which led into another range of apartments. Innumerable bats

whirred past my head, creating an unearthly sensation, which increased the uncomfortable feeling imparted by the gloominess of the place. Numbers of these tombs are most interesting, some displaying the modes of various trades, others those of the fine arts. Every variety of occupation may be seen, and the effect is heightened by glowing colouring. Mummy cases and stone coffins are deposited in them. Mummies are found, some standing, some prostrate, often heaped in great numbers, making it difficult to pass into the pits. The wild Arabs in these tombs have been greatly reduced in numbers of late. They defied the power of the Pacha, and strife was carried on within the precincts of the grave. Belzoni estimates the numerical decline of the Arabs at from 3000 to 300. They are now likely to increase, for all is peace, and a brisk trade has arisen from the produce of the hills. Boats were being freighted with lime. Mummy cases were collected for sale. The bitumen from the mummy brings a good price, and the wrappings are said to make serviceable paper. It is a pity the dead bodies cannot be consumed instead of being scattered as they are on the surface of the ground, often mutilated, or separated limb by limb.

If time were bestowed on these tombs, a great deal of amusing and instructive matter might be collected, for they shew the pursuits of people of all ranks and of all professions. There is great difficulty in discovering those best worthy of research, as there is nothing in their exterior to indicate what lies within. In my walk home I met an Arab, who produced something for sale; it was covered with a piece of linen, and when put aside, a head, severed from the neck, with long glossy hair, fine teeth, and bright eyes, was before me. The features seemed soft and delicate, more like the people I had seen in the East than those who surrounded me.

During my residence here the climate was delightful, except when toiling over sand hills, and exposed to the rays of the sun. In the shade I found it at 6 a.m. as low as 63° , it was at 78° at mid-day, at 10 p.m. it had fallen to 70° ; there was scarcely a breeze, and the atmosphere was grateful to the sense. The night was too fine to admit of sleep; I went on the roof of my lodging, and could distinguish the outline of the mountain with its sepulchral apertures. Occasionally a voice was heard, and a few figures would pass, accompanied by the noisy barking of some watchful dog; all would again subside into stillness. If I looked towards the plain, the broad green belt, in utter solitude, wore the general aspect of desertedness. All was as a vast picture—the mute unchanging mirror of reality.

In the morning I proceeded to the temple near the landing place, where there is a group of palm-trees and the village of Gournou, or El-Ebek. The ruin here has many small apartments, and is much dilapidated. There are pillars, sculpture, and hieroglyphics, which would be interesting but for the more splendid temples in the vicinity. It lies at a very short distance from the road, and ought not to be altogether disregarded. There are a few smaller temples which deserve a brief notice, and are well

worth the time necessary to visit them. In the road from the landing place to the Memnonium, soon after passing the avenue to the king's tombs, a path is seen to incline to the right, by which the mountain is ascended; an avenue of ruined sphinxes is soon observable, and this is found to pass over hills of rubbish on which are walls of brick. The road at length terminates in an abrupt ascent of the mountain, where there is a temple called Northern Dair. Many remains of granite and columns shew the importance that was attached to this temple, which was connected with excavations in the rock. The apartments are now so choked with rubbish as to be impenetrable. Two observations have been made respecting this temple; one noting its direct front towards Carnac, and its avenue running as if to be open to a view from that temple; the other the possibility of there being a communication between this excavation and the Kings' tombs through the mountain. Belzoni never penetrated to the end of his tomb, and an opportunity still offers for the enterprise of the antiquary.

In the Desert west of the Memnonium, a temple called Dair-el-Medinah dedicated to Isis, has some curious mystical representations and remains of sculpture, that rival in perfection and finish the finest relics of Thebes. In a southerly direction from Medinal Habou, are remains of a ruder temple, distinguished by sculpture, hieroglyphics, and fragments, that leave much to conjecture; it is called Southern Dair. In various directions are fragments indicating the existence of other temples, and it is probable that these small temples may have been the most ancient, and that they had been destroyed by some early revolution, which caused the material of them to be transported and employed in the more extensive buildings now the subjects of so much wonder and admiration.

I had been five days wandering in solitude amidst the desolation on this side the river. Daily was I in hopes that some traveller would arrive, or that the owner of the house I tenanted would return. For some time I had ceased to hold converse with my Arab attendant; I was tired of the eternal shrug, or vague answer, returned to my inquiries, and I had been left as a privileged Hadji to pursue my investigations at random. It is a common idea among the inhabitants that the Franks come hither to perform pilgrimage, or the Hajj, as Mohamedans do at Mecca, and to collect religious relics. The religion of Mohamed inculcates respect for the pilgrim, and the effect was evident to myself, more so, perhaps, from my being without a companion and unattended by parade or show. A few of the party that had preceded me from Cosseir and had gone to Khennéh at length arrived. They were soon followed by others, all in pairs, for which the generality of boats on the Nile are only adapted; if there be a third person there will be much inconvenience, or a second boat must be procured. The advantage of going direct from Cosseir to Thebes is evident from the fact that these gentlemen had used their utmost expedition to proceed.





Drawn on Stone, by W. Walton, from a Sketch by Capt. C. Howard

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GENERAL VIEW OF THE RUINS AT LUXOR.
taken from the N.W.

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GENERAL VIEW OF THE RUINS AT LUXOR.

ON the 6th of January I re-crossed from the western side of the Nile, and on my way took a general view of the Ruins at Luxor, which have been thus described by Belzoni: "The Temple at Luxor presents to the traveller at once one of the most splendid groups of Egyptian grandeur. The extensive propylon, with the two obelisks and colossal statues in front; the thick group of enormous columns, the variety of apartments, and the sanctuary it contains; the beautiful ornaments which adorn every part of the walls and columns; the battle on the propylon, cause in the astonished traveller an oblivion of all he has seen before." The boundary of this temple cannot be questioned; the extreme length from the entrance at the north-west end, to the wall still washed by the waters of the Nile, and which defined the opposite boundary, is about 1200 feet. This space I have divided into three parts, and of each I have given a separate view, which will detail the particulars. That of the end nearest the city includes the propylon, there was a large oblong court behind it, which had a double row of columns at each side, the end of the court opposite the propylon being ornamented with an avenue of twelve columns, having spreading capitals; these lead to the middle division, (as in the Plan,) which include a second oblong with a double row of columns on each side, eleven in number, and terminated at the end near the river by four rows of the same column running across, having eight in each row. Still nearer the river is a third part of the temple, supposed to have been the sanctuary. It has several apartments within, and there are remains of many columns in its front, running towards the stone pier that winds along the side of the river below the ruin, forming a little harbour, which was further protected beyond the stone pier by a massive brick projection, sufficiently well cemented to resist the annual inundation to this day. There are many fragmentary monuments, which shew that minor features are absent from the great skeleton of the temple which remains. By comparing this ruin with parts of other temples, the outline seems perfect, and we have strong proof of its being so, from its eastern and western extremities being defined as above described, as its sides are by the formation of the hills it stands on. A wall that once bounded it, may also be traced. It may appear extraordinary that a building offering ready materials, so near a place of embarkation, was not totally destroyed on the removal of the seat of government to Memphis. But at that time idolatry still prevailed and saved the temples, though the city probably suffered. When a third capital, at a later period, was formed still nearer the sea at Alexandria, Thebes was again saved by the more ready supply of materials from Memphis.

The Arab houses surrounding the eastern end of the ruins have the appearance of connected

square forts, and look formidable at a distance, but lose much of their respectable character upon a nearer approach. These houses are built in this particular form for protection; a few loop-holes admit light, they are crowned with battlements that have the openings and often the whole tops of the walls filled with jars of pottery, which form nests for pigeons. There is generally a row of bushes like pallisades, just below the battlements, also to accommodate the pigeons, of which there are immense flocks belonging to every village. This system is followed, in consequence of the Pacha being the sole proprietor of the soil, the crops of which are collected and again distributed at the price government may affix. Distress is therefore often felt by the peasants in the most abundant years, from the demand abroad being extensive. As a resource the *fellahs* have the pigeons to depend upon. Some few Arab houses are seen on the massive stones that cross the columns. On the right of the plate is a cluster of palm-trees, which lies on the path leading to Carnac. The situation of Luxor on a height projecting into the river is beautifully chosen for effect, and as I dwelt on its outline I was led to speculate on what it must have been when it was the boast of a populous city, and when that city, as the emporium of commerce between the eastern and western worlds, contributed its riches towards its embellishment.

The thermometer at mid-day stood at 78°, and I became impatient to return to the village, but so sadly has the boatman's skill degenerated in the Thebaid, that my two rowers could not pull up against the current, but were obliged to make a circuitous manœuvre to gain its co-operation in crossing. The village of Gournou to the north, and Luxor to the south, with the temples of Medinah Habou and Carnac on the opposite quarters, are supposed to have been contained within the boundary of ancient Thebes. The current of the Nile varies in strength with the season, and with the height of the waters. The stream is seen to wind above Luxor, and it is seldom that its bosom is undisturbed by a djerm or cangia, bearing the pointed sail spread to catch the north wind, or simply gliding down by the force of the current. In the latter case an oar is used to keep the boat in the running water, and its broadside to the stream. The aspect of Luxor, from its position, with the walk through the obelisks, and amidst the masses of columns, must, in advancing to the sanctuary, have been most imposing. Here we may imagine the solemn procession transporting the dead body to its place of rest, there being no pits or tombs to indicate a burial place on this side of the water, while those on the western bank appear to have formed the necropolis for the whole city. The form of the temple will be better understood by a reference to the plan that accompanies the work.

SOUTH-WEST DIVISION OF THE RUINS AT LUXOR.

On nearing the shore at Luxor, a strong built wall of squared stone is seen following the bend of the river; it forms a well-protected haven, secured from the running stream, and covers a bank of sand that seems to be accumulating in the vicinity of the temple. The wall fixes the ancient boundary of the sacred edifice. When I saw the river in December, it stole gently and unmurmuring past this buttress.

"Who that beholds thee, Nile, thus gently flow,
With scarce a wrinkle on thy glassy brow,
Can guess thy rage when rocks resist thy force,
And hurl thee headlong in thy downward course;
When sporting cataracts thy torrents pour,
And nations tremble at the deaf'ning roar;
When thy proud waves with indignation rise,
And dash their foaming fury to the skies!"

Near the landing-place were two figures, like those Belzoni found in such numbers within the precincts of Carnac.

Although the whole structure at Luxor is denominated the temple, there is reason to suppose that the portion of it before us was alone consecrated to sacred purposes, and retained for the service of the priests. Here, no doubt, was the sanctuary, in the centre of which we find the cella where the shrine or deity was deposited. A reference to the plan will show the part of the temple alluded to. It is the portion included between the line *B C* and the river. It is roofed with stone, and is divided into apartments of various dimensions. The mode of forming such edifices in the primitive ages will be more clearly illustrated in the succeeding Plates. Columns are found in each apartment, in proportion to the area, and at a distance from each other and from the walls, to enable a substructure to be formed, to uphold the large slabs of stone that were used to form a roof. The central rows of columns are always found to have a greater opening to accommodate the march of the procession; and if we judge from the splendour of the approach to this sanctuary, the ceremonial observances must have been of a most magnificent description. The entry through the propylon, and between the courts and columns, depicted in the other illustrations of this temple, is found to front the only opening to an oblong apartment, or the *sanctum*, situated in the midst of the enclosed edifice. This sacred chamber has a length of 24 feet by a breadth of 18; no column supports its roof, and it is the only part of the edifice built of granite, the remainder being of sand stone. Travellers who reach Egypt from India, where the practice of idolatry is maintained with its ancient attributes, will at once identify this sanctuary as the depository of the idol. In such recesses the lamp sheds its

"darkness visible" on some hideous figure, with various decorations to draw admiration from the deluded Hindoo, who makes his offering and bows to the god of stone. Smaller temples, often monoliths, are formed within the sanctuary to contain the god. We are told that the same description of small temple was used by the Egyptians. One of them may yet exist in this sanctuary at Luxor, where sand and rubbish has accumulated to the height of many feet. Around this secluded apartment a passage winds, which formed a walk for the priests, and, as in the adytum at Denderah, probably communicated by means of steps with the roof of the building. I required a torch to view the numerous figures and hieroglyphics that embellish all parts of the walls; among them are offerings of fruits, birds, &c. Isis and Osiris are receiving homage, and distributing symbols of divine favour; cornices are formed of numerous small upright figures resembling mummies; and women are seen suckling infants. The beginning and the end of man's career are here pourtrayed, and there are many mystic signs and figures that apply to middle life. The whole is banked up with rubbish and sand, and it will be necessary to bear in mind throughout the inspection of the illustrations that relate to it, that the different parts are now lost to the view from 20 to 30 feet above their base.

At present a mud-built house, belonging to the governor of Luxor, occupies the summit of this building, and renders the interior of the sanctuary a mass of dirt and filth which comes pouring through the roof. In these apartments there are some good specimens of the style of Egyptian sculpture and painting, and we probably have the primitive essay, or first advances in the art. No shading or perspective is attempted, and the roundness necessary to throw into the limbs of the human form is beautifully moulded in stone. The artists first marked the contour of the figures, and then cut sufficiently deep within the outline to enable them to give fulness to the limbs, of which the joints are often developed with peculiar force. The chissel was then used to carve the elaborate ornaments and head-dresses that characterize the figures, (some much more than others,) so that they were left by the sculptor a complete representation of what was intended. But the perfection of bas-relief was not sufficient for the age of the Pharaohs. The painter displayed all his skill in arraying the sculpture in colours, that excite wonder and admiration for their unrivalled brilliancy thirty or forty centuries after the application. Red, yellow, green, and black, are used in flat washes; blue has various degrees of shades, but is always laid on in flat washes also; there is much art displayed in assorting the colours to avoid harshness. In this early age, however, we do not meet the correct style of modern delineation. The profile of the face, with the full length feet, is drawn on the walls, having the figure with square shoulders, which give the whole a distorted appearance. The colours in the sanctuary at Luxor are faint, in consequence of exposure to the air. The Egyptian art of painting may be studied to greatest advantage in the secluded apartments of the tombs. There is





SOUTH-WEST DIVISION OF THE RUINS AT LUXOR.

taken from the West.

LUXOR—SOUTH-WEST DIVISION.

a sufficient array of hieroglyphics at Luxor to make the temple worthy of attention; and the bas-reliefs are especially deserving of notice.

The base of this division of the edifice was below the level of the remainder of the pile, and may have communicated with the waters of the sacred river. It is to this peculiarity of situation, that Herodotus doubtless alludes, when he speaks of those persons found drowned in the Nile, with whom no one, except the priests of the river, whether friend or relation, was allowed to interfere. To those who have witnessed the homage paid by the Hindoos to their sacred streams, this custom of the ancient Egyptians will not appear so marvellous.

Religion with the Egyptians was the basis of all their laws, and priests, as in India, were the influential cast by whom the actions of king and peasant were determined. They sustained their authority by superior knowledge, and blended religion with astronomy; we therefore find that the heavenly bodies were objects of adoration; the principal deities, Osiris and Isis, represented the sun and moon, and were thought to have unlimited power over terrestrial affairs. The Nile was also held in high veneration. To each divinity there was an order of priests; next to the rank of the sacerdotal tribe were the soldiers, then followed shepherds, swineherds, mechanics, interpreters, and lastly fishmongers, comprising in all seven grades. The system of castes observed at this day among the Hindoos will be found closely to assimilate to the above. The tyranny of the Brahminical code, which tramples on the body of the people, is not more appalling than the severe discipline we are told prevailed among the Egyptians. Egypt as a nation appears to have attained greater strength than India, and by arrogating to itself a power not natively its own, to have worked its total overthrow. India still exists with her timid idolators veiled in ignorance. Another generation brought up in the blessings of education, now fast spreading in that country, may expose the folly of the Bedahs and Shasters, and establish a pure religion in the place of superstitious absurdities.

The following remark of Herodotus will give some insight into the connexion between Egyptian religion and science: "They also, from observing the days of nativity, venture to predict the particular circumstances of a man's life and death." The expense and labour bestowed in raising temples, decorating tombs, and in preparing the body for interment, are evident proofs of the superstitious tendency of the people; and when we consider the distance of the quarries whence the materials were transported, the labour of separating them from the primitive mass, the difficulty in the present day of removing one of their obelisks, without considering even how it is to be raised, and the height of the pillars that surmounted enormous masses of substructure, our minds must be prepared for all

LUXOR—SOUTH-WEST DIVISION.

the wonders of ingenious perseverance that characterise the social history of the country. We now look in vain for some remnant of the ancient inhabitants. Their representatives are the Copts, of whom there are a number among the population of Luxor; they are the poor remains of the Christian church in Egypt, are chiefly confined to the Upper Provinces, and are estimated at 30,000 families, or 200,000 souls. There is no difficulty in distinguishing them from the Turk, who attaches nobleness to weight, or from the Arab, whose life is activity. The Copts are a race of grovelling, clumsy-shaped, determined calculators, resembling in character the Jews of Europe, and the Parsees of India: they are the old Egyptians mixed with the Greek and Roman conquerors, but they have never amalgamated with the Mohamedans, who, finding them useful as stewards and accountants, do not persecute them on account of religion. Servile from long degradation they are content in their search for profit to live in dependence on the haughty Moslem; their narrow ideas prevent them from exerting themselves in the cause of true religion, and cause them to resist the efforts of enlightened Christians. It is melancholy, that in this country where a Christian church was established by the labour and ardour of true divines, the descendants of their proselytes should be in a condition so degraded.

It is impossible to view this temple casting its broad shadow on the waters of the Nile, and not call to mind the sacred edifices in India, so often seen overhanging the banks of rivers, or elevating their stately proportions in the vicinity of tanks. The ancient Egyptians believed ablution necessary to cleanse them from all impurity. The practice of shaving the head, as at present observed by the Brahmins, was also common to Egyptian priests, and was done to forward the same object. At the present day in India numerous votaries crowd the shores near sacred places, for the purpose of purifying by immersion, and to possess themselves of the sacred waters. The scrupulous observance of the Hindoo in cleansing their brass urn-shaped vessels must be familiar to every Eastern traveller. The Egyptians are said to have cleansed their brazen goblets every day; and it is remarkable, that vessels similar to those of Hindostan are seen in the Egyptian paintings. Other distinctive features, especially that of castes, and the supreme rank of the priests, are noticeable in both nations. Travellers, who have observed the idolatrous rites of the Hindoos, will have found a key to much that is remarkable in Egyptian temples, and they will be familiar with such incidents as form the characteristic features of the stubbornness that directed the besotted worshippers of Apis.

The present name of the temple, which the adjacent village especially bears, is derived from the Arabic phrase El Aksor, signifying ruins.

CENTRE DIVISION OF THE RUINS AT LUXOR.

THE central portion of the temple is that part included between *B C* and *D E* in the Plan, and comprises what was called the court, or *dromos*. Four rows of columns, with eight in each row, stand fifty-four feet from the back wall of the building, described in the last Plate. These columns are at regular distances from each other, having a wider opening through the centre. A substructure still remains, and leads to the conclusion that the whole was once roofed, and formed a hall, or portico, leading to the sanctuary. This portico, which crossed at right angles to the approach, had its roof connected with walls on either side, and extended across a distance of 160 feet, forming one side to the court. From the inner angles of the portico the sides of the court run at right angles, and are formed by double rows of columns, extending eleven deep; these are also supposed to have been roofed, and connected with side walls, of which there are still some remains. A noble piazza would thus be formed, enclosing an area of about 2500 square feet. Here the spectators would assemble to behold the sacred bull marched in state, and to witness the many arts practised on the faint-hearted idolators. The opposite side of the court to the portico is terminated in a noble avenue of pillars, which will be seen in the succeeding illustration. Between this court and the avenue are fragments that show the downfall of some minor features in the grand outline, and by examining other structures we may conclude that a second propylon stood here to add still more to the importance of the approach. There are other heaps of rubbish which excite conjecture, and portions of colossi leading to the supposition that much is yet concealed. The traveller in his researches finds himself impeded by mud hovels, and encircled by swarms of beggarly Arabs. The present inhabitants find room for the construction of houses on the masses of stone that lie across the columns. From the antiquity of Thebes there can be little doubt of these structures presenting to our view the first efforts of mankind in architectural science. This, and the succeeding Plate, will therefore show the primitive orders. In forming these the Egyptians are supposed to have taken the lotus, their sacred plant, as the model. We have observed that the same plant is tied to an upright post in the representation in the colossal statues, where the full blown and unblown flower are both used. Here we see stalks of the plants, with bindings at different distances, arranged to form the column before us, with a capital formed in imitation of the bud. The other order of architecture in use at this period, as seen in the next Plate, was an imitation of the blown lotus, and forms a more elegant and simple device.

In other temples at Thebes, a march towards early improvement is evident, and we may presume that the edifice at Luxor, raised as it is on the boundary of the sacred river, may have been the first of the great temples constructed at this place. A reference to illustrations of other temples will show that the form of column used in this Plate gave way to a closer imitation of nature, and, instead of bundles of stalks, a single plant appears to have been adopted as a model for both orders of Egyptian architec-

ture. It will be seen that much taste and labour were bestowed to relieve the smooth surface of the columns by numerous carved representations of the sacred plant, intermixed with forms of leaves. The shaft of the column, like the stalk of the plant, is always found to diminish as it rises, and like the calyx it will be observed to round at the bottom before entering the pedestal or base. This part of the column is buried in rubbish at Luxor, but it will be seen clearly illustrated in the sketch of the Memnonium. The traveller cannot explore the ancient relics at Thebes without perceiving visible efforts to introduce new orders of columns. Such attempts are traceable in buildings supposed to have been of more recent date than the body of the temples. Such are the columns in front of Medinah Habou, where the outer circumference of the cup capital is indented, and where the reliefs are strongly brought out to form a near approach to the Corinthian order. The shafts of the columns bear a different proportion in diameter to the height. In other structures there is an attempt to break the formality of the closed capitals; an approach is thus made to other orders of architecture. The enormous circumference of twenty or thirty-five feet given to the columns at Luxor, and the massive superstructure they support, have been nearly equalled in various temples in Europe. The ancient temples in Greece, as well as in Sicily and Italy, bear a close resemblance to the architecture of Egypt in bulk and proportion. We are told, that until after the Macedonian conquest, none but the Doric order was used in Europe. We find that the proportion of $5\frac{1}{2}$ diameters for the height of the columns, as at Luxor, exists in these European ancient temples, and the Tuscan order used in them bears a close similarity to the style of the ponderous Egyptian columns. The traveller from India will probably have an opportunity of seeing specimens of this architecture at Paestum and Agrigentum. The Doric style retains the massive grandeur, and was succeeded by the Ionic, which possessed more majesty. This again gave place to the Corinthian, which surpassed the others in richness. But the great improvement in architecture that corresponded to the introduction of these orders, and followed with the march of years, was the elongation of the shaft, and the diminution of the bulk of the superstructure. We may conclude that nature formed the prototype of architecture in Egypt, from which country the Greeks no doubt derived their taste for improvement in building.

The state of architecture at the period when these temples were constructed, forced the Egyptians to adopt that solidity in their structure which renders them, if undisturbed, as firm in the present day as they were thirty centuries ago. The immense masses of stone which form the architraves, had from necessity a length of twelve or eighteen feet to reach the centre of two adjacent columns. To give as much height as possible to their halls or piazzas, they surmounted the pillar with a square block of great thickness, crowned by the ponderous architrave, causing altogether such an enormous weight to be supported when the roof was added, that the diameter of the pillar, neces-





CENTRE DIVISION OF THE RUINS OF LUXOR.

Taken from the West.

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LUXOR—CENTRE DIVISION.

sarily of most unsightly dimension, obstructed the view, and concealed the observance of any extensive part of the ceiling or walls, which were rendered so interesting by the processions and figures that adorned them. Had the Egyptians been further advanced in architecture, and had any other means of supporting a roof been known, such as the principle of the arch, it is likely that their buildings would have disappeared many centuries since. The same observation will apply to their statues, the magnitude of which was owing to their incompetency to convey by attitude or design, the dignity or importance they wished to attach to the subject. We find, for example, if a great prince or conqueror is pourtrayed by the chissel, his importance is characterized by his superior dimensions. Belzoni concludes his account of these views with the following remarks: "It appears to me like entering a city of giants, who, after a long conflict, were all destroyed, leaving the ruins of their various temples as the only proof of their former existence." The Egyptians were perfectly sensible of the beauty of the elliptical or arched roof, and it is found, but always carved, as in the tombs of the kings, from the solid rock. There have been many discussions as to their ingenuity or knowledge on this point. Another proof of their deficiency on this head is found in the Pyramids of Cheops, where the weight above the roof of the passage, which is seven feet wide, required some means of support more than the square roof admitted of; this is provided for by causing each layer of stone to project four inches beyond the one beneath, which continues for seven rows, requiring the roof or top stone to be no broader than about thirty inches. These layers are about three feet high, and cause the top of the passage to be completely lost to the eye. That they had a desire to represent the arch, is evident from the cause already named, of their having introduced in their most extensive and finest painted chambers all those that were used to contain the sarcophagus.

The arched excavated chamber is also found in India, and there are other striking points of similarity between the two countries. In Egypt the excavations, or rock temples, are no doubt connected with an era in the history of that land, subsequent to the building of Thebes. In India the most wonderful works are those found hollowed in the sides of mountains, such as the caverns at Ellora, which display a variety of conception, and have a degree of labour bestowed on them that altogether defy conjecture, and compete with the boldest efforts to be seen in Egypt. The temples of Ellora, near the centre of India, lie in recesses, as if intended to evade the public eye, resembling in this respect the tombs of the kings at Thebes. They assume a variety of forms, some representing square chambers, with pillars and architraves, all of solid rock. Others have an arched roof, with hewn rafters, and here no pillar is introduced. A third form represents a pyramidal temple, or pagoda, of one mass, detached from the rock, of which it once formed a part. A mountain is thus hewn into a city of temples, while detached parts are wrought into porticos and figures to ornament the approaches. India was beyond the observation of sacred historians, and profane writers knew little save the fact of its existence. The inhabitants of the country have ever kept within the boundary of their sacred rivers.

LUXOR—CENTRE DIVISION.

The cloud that envelopes their early annals has never been sufficiently removed to stimulate enquiry, which it would far exceed the limits of this work to institute here. From the circumstance of my having explored the caves at Ellora, I cannot pass them over unnoticed. They are obedient to no rule of architecture in their exterior form or internal decorations. The columns are square, circular, or octangular, or combine all these forms. From the representation of architraves and rafters, it would appear that other structures had been found previous to such excavations. Every cave and every column have a variety, differing totally from the despotic rules that governed Egyptian architecture, which were so long followed with such little deviation, that it stamps the temples at Thebes as the fruits of the original architecture of that country. It would seem as if the two nations advanced in art distinct from each other, with equal resources, those in India being applied to decorations and invention, while in Egypt they were devoted to magnitude and boldness of conception.

Champollion, in one of his letters dated Thebes, makes the following observations on Egyptian architecture: "It is evident to me, as it must be to all who have examined Egypt, or have an accurate knowledge of the Egyptian monuments existing in Europe, that the arts commenced in Greece by a servile imitation of the arts of Egypt, much more advanced than is vulgarly believed, at the period at which the first Egyptian colonies came in contact with the inhabitants of Attica, or the Peloponnesus. Without Egypt, Greece would probably never have become the classical land of the fine arts, such is my entire belief on this great problem. I write these lines almost in presence of bas-reliefs, which the Egyptians executed with the most elegant delicacy of workmanship 1700 years before the Christian era. What were the Greeks doing then?

"The fertile plains of Egypt flourished then,
Productive cradle of the first of men."

The lotus flowers, so often mentioned as emblematic of Upper and Lower Egypt, and as first suggesting the orders of architecture, is thus described by Herodotus: "When the waters have arisen to their extrekest height, and all their fields are overflowed, there appears above the surface an immense quantity of plants of the lily species, which the Egyptians call the lotus; having cut down these they dry them in the sun. The seed of the flower, which resembles that of the poppy, they bake, and make into a kind of bread; they also eat the root of this plant, which is round, of an agreeable flavour, and about the size of an apple." The figures represented in the sketch as approaching towards the boats, are women in their common dresses, wearing a sort of veil which hangs from the face, with an opening for the eye; the whole dress is remarkably loose, no part of the form is observable, and a wrapper, or large mantle, bound across the forehead, is added to cover and conceal the figure; this they keep together in front by the hands, and the mules are led by attendants, who walk beside them. In the cities armed servants accompany the procession, and look defiance at all who may venture to pay any kind of attention to the passing scene.

NORTH-EAST DIVISION OF THE RUINS OF LUXOR.

We have now arrived at the division of the temple farthest from the river, or the part of it beyond the line C D in the Plan; the propylon, of which the back is seen on the left of the view, is the same designated "Approach to the Ruins of Luxor," in the Vignette, and through it the entrance led from the city. Immediately within this noble gateway was a court, or dromos, similar to one described in the last illustration. Portions of columns that formed part of the verandah are visible, and some are preserved within a mosque, whose circular dome and rising minaret form conspicuous features in this view. Parts of colossi, with masses of granite and shapeless tumuli, lie scattered in every direction; they are remains of many minor features and decorations that were used to heighten the pageantry of procession and the pomp of superstition. Passing through the court, whose end opposite to the propylon was probably ornamented by a similar but lesser structure, the visitor arrives at a noble avenue of fourteen* majestic columns, one of which would suffice to command our admiration in the present day. In viewing these noble specimens of art and labour we must pause, and connect them with the remainder of the temple; and much is our surprise increased on finding what is now before us, in conjunction with the display in the last Plate, is but the approach to the sanctuary. When we bear in mind that nearly half of these remains is buried in the soil, and that numerous statues and idols are departed, or concealed beneath the surface of the earth, man cannot but pause on the lesson that is here offered to him, and while he contemplates the resources and science that were requisite to execute a work of such magnitude, he cannot but wonder that so powerful and numerous a people should be totally swept from the earth. If the Pharaoh who proudly exulted in his deeds could at this distant period view the desolation that now characterises this scene of his triumph, how thoroughly would he find it a monument of the weakness of his false gods. With this impression and such a conviction, most travellers depart from these remains. But if this scene of grandeur and desolation is not enough to satisfy the mind of the investigator, his eye will attain the pyramidal top of two lofty obelisks towering above the giant portal; their solid shafts of granite were transported from the extremity of Egypt, and are decorated with mystic characters, alluding to some history too old to be known; it no doubt refers to the giant statues seated at the base of the obelisks. They are also marked with hieroglyphics, and are of the size of houses in our modern days. If more is sought by the reveller in giant works, let him depart from the gates of Luxor, and he will trace a wide avenue where distorted nature takes the form of sphinxes, extending more than a mile across the plain, and terminating in a new and endless field for wonder at the Temple of Carnac, already noticed in this

Journal; and here are porticoes, propyla, courts, sanctuaries, and giant figures, to move the most sight-despising stoic of the age.

In remarking on the last Plate we observed the style of architecture to be seen in this portion of the temple. The avenue of cup pillars before us, supposed to be an imitation of the blown lotus, are not more admirable for their beautiful simplicity than for their magnitude. When fully open to view, the shafts of these colossal columns showed a height of sixty feet, and were surmounted with substructure which raised the massive roof some twelve feet higher. Stones to form the architraves of this magnificent avenue required a length of twenty-four feet to meet the centres of adjacent pillars. At the visible base these columns have a circumference of thirty-two feet, which would be increased to forty at their foundation. Each layer of stone is composed of two semi-circles, and averages a thickness of forty-two inches. To estimate fully the persevering labour the Egyptians displayed throughout these works, would require the calculations and experience of an architect; but the enormous dimensions of the different portions of the edifice, the transporting and raising such masses of rocks into columns, crowned with their vast superstructure, cannot fail to fill every mind with wonder, and must convey a solemn and awful sensation to all who contemplate them. None besides can fully appreciate the terrific grandeur and the melancholy desolation that characterise these ruins. We hope, ere long, they will be the general resort of travellers. The writer must be satisfied to offer this invitation, which is accompanied by a project for its prosecution, as something to compensate for the inadequacy of his description.

I reluctantly departed from this propylon, and felt that I was withdrawing from scenes that, in point of interest, have no equal, and as I looked back on the stately obelisks to take another and another departing glance, the following remarks of the author of "Scenes and Impressions" often recurred to my mind. "Before the grand entrance to this vast edifice, two lofty obelisks stand proudly pointing to the sky, fair as the daring sculptor left them. The sacred figures and hieroglyphic characters are beautifully cut into the hard granite, and have the sharp finish of yesterday. The very stones look not discoloured. You see them as Cambyses saw them, when he stayed his chariot wheels to gaze up at them, and the Persian war-cry ceased before these acknowledged symbols of the sacred element of fire. Very noble are all these remains, and on the propylon is a war scene much spoken of; but my eyes were continually attracted towards the aspiring obelisks, and again and again you turn to them with increasing wonder and silent admiration."

Should the traveller be inclined to pursue his route to the "Tropical Gardens," and view the different quarries, from which the materials have been collected for the wonderful structures already

* Inadvertently described as twelve in the "General View of the Ruins of Luxor."





NORTH-EAST DIVISION OF THE RUINS OF LUXOR.

described, the following notes will be found useful. The first place reached above Luxor is Erment, on the west bank of the river, where there are remains of ancient Hermontis, and of three temples, supposed to be of the Ptolemaic age; there are also the ruins of an early Christian church. These ruins, as connected with the more perfect ones in the vicinity, are not thought worthy of much attention. Higher up, at Asfoun, are heaps of rubbish that mark an ancient site; there are also granite fragments. The next place to be noted is Esneh, the ancient Latopolis, near which the stratum changes to sandstone; from this district materials were taken for the temples at Thebes.

Esneh is a garrison and commercial town, with a good bazaar and manufactories, carrying on a trade, by means of caravans, with the interior of Africa. The place exhibits considerable bustle, and contains about 300 or 400 Christian families. It has a temple like that at Denderah, (now used as a cotton manufactory,) which is said to have been built by the Ptolemies, and sculptured by the Romans. About three half hours north of Esneh there is another temple, presenting, like the former, symbolical signs connected with the Zodiac, also a variety of figures and hieroglyphics; they are said to be inferior in execution to those at Denderah. Some distance from the river, on the opposite side, is a temple not worth visiting.

At Esneh the valley widens to an extent of nearly four miles, and exhibits fine cultivation; it again narrows at El Heigs. At this place the mountains contain grottoes, with some remains of ancient Eleithyia; the ruins are much buried in sand. The sepulchres are supposed to be very old, and display scenes of agriculture, and sports of the ancient Egyptians.

Edfou, higher up the river, is a large but poor town. It possesses the remains of a temple, 440 feet long, and half as wide, with pillars, 40 feet in height, of the same form as that at Denderah, and not inferior to it, supposed to have been built in the same age. There are also remains of a small temple. Above Edfou the rocks on each side project towards the river, and shew numerous quarries, the most extensive of which are on the eastern side. They are remarkable for size, and are approached by passages through the rock, from 100 to 300 feet in length, which lead into an area 500 feet by 250. On the sides of the quarries there are many interesting representations of instruments for labour, &c.

The next place is Koom Ombo, occupying the site of the ancient Ombos, where are the remains of a fine temple of the Ptolemies, and also of a smaller one, dedicated to Isis.

At Es-Souan, or Syene, the last town in Egypt, there are good bazaars. The Nubian language is first spoken here.

At Syene the Pharaohs and Ptolemies raised temples and palaces; the Romans and Arabians erected forts; the French pitched their tents, and the learned men of Europe erected observatories. Rocks of granite relieve the hills of sandstone, and afford fresh materials to decorate the cities of Egypt. Fragments remain, that were to have added further testimonials of the power and industry of the ancients. An obelisk is left partly formed, and clinging to its native rock, as if to

KHENNEH.—DENDERAH.

attest the architectural eminence of the country. The islands of Elephantine and Philoe, rich in foliage and splendid remains, abound in objects that would almost exhaust the power of language to describe.

I had no difficulty in hiring, at a charge of two dollars, a *cangia*, or undocked boat, to proceed to Khennéh. I left the village of Luxor at five o'clock in the evening, without a companion to participate in the pleasure derivable from the interesting objects on either side of the Nile. The air was refreshing, and stirred the tranquil waters of the river. The outline of the Lybian chain became fainter and fainter as I withdrew from the contemplation of ancient Thebes. For some time my thoughts were kept awake by the splash of the oar, occasionally broken by a chorus of the rowers, who joined in at the end of each verse of a song, sung by a leading voice, "Hamesha—ma—halle—la—yah." This was repeated at intervals, and suddenly breaking on the ear created a feeling that was far from disagreeable. A solemn style and melody characterize these Arab tunes. I am not aware how long the music was kept up, as I heard no more, and was surprised on awaking in the morning to find the boat secured at the landing place at Khennéh. The night had been cool, and I was not sorry that a walk of three half miles was required to reach the town, as it served to warm me.

Khennéh, which was the ancient Cænopolis, stands on the east bank of the Nile, where a bend of the river causes it to be the nearest town to the Red Sea. I was conducted to the house of a Copt, who is the British agent, and here I found three of the party whom I have previously mentioned as having preceded me from Cosseir; they had not been able to procure a boat suited to accommodate more than two persons. Khennéh is a poor representative of the ancient emporium of Eastern commerce that once poured its rich produce through this channel; though it has a well stocked bazaar, animated by the presence of numerous pilgrims passing to and from Cosseir and Mecca. Caravans from more southern parts of Africa arrive here on their way to Siout. This market is also visited by the wandering Arabs from the opposite side of the river, who exchange gum and senna for wearing apparel, and the few luxuries their wants require. A cotton manufactory of the Pacha's, with machinery worked by bullocks, was the first object connected with modern arts I had seen since leaving India. Several of these manufactories are observed on the banks when descending the river; they are superintended by Europeans, and are about to be improved by steam machinery. Khennéh is noted for the quality of its jars and pipe bowls, which are formed of a compact marl, and being half baked in the sun, are completely hardened by means of a straw fire. Similar manufactories are common throughout the country, and pottery is cheap enough to be used in the walls of most mud hovels. In walking on the banks of the river, flakes of mud, left by the retiring waters, are found, baked by the sun, and difficult to break, shewing the perfect facility with which pottery or bricks may be formed. The mud deposited by the Nile is of a dark colour, and becomes reddish when diluted with water. At the landing place already named, a ferry boat crosses the river, and lands the passenger opposite to Denderah.

TEMPLE OF ISIS, OR TENTYRA.

THIS noble ruin stands on the edge of the Desert, about two miles from the river. The intermediate country is influenced by the rise of the Nile, and has a desolate appearance, being overgrown with coarse grass, while the canals that intersect it make the route inconvenient. Soon after clearing the belt of cultivated ground, remains of ancient Tentyra, with some ruins, become conspicuous. A noble propylon, similar in form to that seen on the approach to Carnac, next presents itself. It is of sandstone, and is perfect in style and in the elegance of its sculpture; but it was arrested in its progress to completion, and was doomed to continue in an unfinished state. Its height is upwards of 40, and its width 33 feet. Passing through this entrance, mounds and excavated pits, fragments of architectural ornaments, and mud houses, are mixed confusedly together. Enough is seen to shew that there is an extensive depository of valuable relics. On the right is a small temple, dedicated to Typhon, whose hideous figure forms capitals to the pillars, as the head of Isis does to the great temple before us. To many who have passed by this route from Cosseir, without an opportunity of visiting those ruins already described, it will be a satisfaction to know, that "after seeing innumerable monuments in the Thebaid, it seemed as if we were now arrived at the highest pitch of architectural excellence that was ever attained on the borders of the Nile." The portico of this temple is supported by 24 cylindrical pillars, which stand three deep. Their capitals are ornamented with a face of the goddess on each side. These pictures fill a square space of eight feet, which is the extent of the diameter of the pillars. The height of the plinth that crowns the capital is another peculiarity in this structure. The whole is finished by a rich entablature, surmounted with the bold cornice, always so striking in Egyptian architecture. If clear of rubbish, this beautiful structure would present a front of 160 feet, with a height of 60, the whole being one picture of 960 square feet, relieved with processions of persons bearing offerings, accompanied by musicians. Isis, with Osiris, are seen seated, and receiving the offerings. In other parts the goddess is depicted nursing her son Horus. The winged globe, poised over the entrance, is represented within the portico, all along the centre of the ceiling. The compartments between the pillars, forming the roof of the portico, are filled with a continuance of processions, among which is found the Zodiac, that has caused so much enquiry and controversy. Religious processions, with boats, and numerous mythological devices, fill the whole interior, making this temple a most memorable object in the Egyptian annals, and a wonder to the present age. The entire mass of figures constitutes one great Pantheon, containing such an abundant variety of portraiture as of itself appears an ample pictorial history. It is to be feared, notwithstanding the progress said to be making in the exposition of hieroglyphics, that this interesting tablet is doomed to remain a stumbling-block to the learned. All that is describable here is distinguished by vivid and original colouring, and a few days of the traveller's time would be well devoted to the study

of the whole. The remainder of the temple consists of small chambers, one of which is the sanctuary, and there are small apartments leading to the sides, but they are so blocked up with sand and rubbish, that it is difficult to enter, or define their extent. They are ornamented and painted to correspond with the portico. These interior chambers had no light, except what was introduced by conical openings from the tops and sides, with a small aperture at the apex, diverging to a large diameter in the inside of the building. It was a vague and doubtful light, well suited to the rites of a mystical faith. One of the side chambers leads to a spiral staircase of easy ascent. Here apertures for light, such as have been described, are beautifully wrought. The sides of large cones are formed of smaller ones, curiously blended together.

At the summit of the temple there are small chambers on each side, and the ceiling of one of them contained the circular Zodiac now in Paris. The ceiling of the other is curious, and is also connected with the symbols of astronomical science. On a celestial blue, spangled with stars, are rays of light issuing from the bosom of a female; globes, with legs, are seen as if walking; other globes are objects of adoration to kneeling figures on either side. The whole is wrought in calcareous stone, well brought out, and presenting a singular and interesting coloured picture, occupying a space of 20 feet by 12. The remainder of the roof is covered with rubbish of modern mud structures, which nearly bury some fragments of a small temple. Outside the walls of the great temple are figures and hieroglyphics, executed in the best style. The principal figures have flowing dresses, and elaborately worked ornaments, which call to remembrance those in the tombs of the kings. Behind this temple is another, dedicated to Osiris and Isis, who are here again depicted receiving offerings. The walls and ceilings are covered with hieroglyphics, similar to those in the adjoining edifice.

A second propylon stands about 500 yards east of the temple. There are mounds of rubbish, no doubt concealing other structures. Like the sacred edifice at Thebes, the precincts of the temple probably became the last resort of the people. Village on village followed, with successive revolutions; and mounds of earth now vie in height with the temple. Walls of unburnt brick, of a thickness of 12 feet, and sometimes of a considerable height, still remain; they mark a boundary of more than half a mile square, which was no doubt the limits of the sacred edifice.

This temple is supposed to have been built by the last of the Ptolemies. The features of its peculiar style of architecture mark a different era from that of the massive structures at Thebes. Here there is more art and less solidity; and we note the absence of the noble and extensive outline that forms the characteristic of the older structures. A change, it may be presumed, had taken place in the affairs of the state. We see no king in the career of victory, or in the condition of a conqueror. The resources of the nation are evidently on the decline.





VIEW of the TEMPLE of ISIS or TENTYRA at DENDERAH,

on the Banks of the Nile

DENDERAH—TEMPLE OF ISIS.

There would not be much expense, and no difficulty, at present in obtaining a perfect representation of every part of this temple, to enable a model of it to be preserved in England as an historical record. But in a few years this will be impracticable, for the edifice, like others in Upper Egypt, is yielding fast to the assaults of man.

Modern travellers have mentioned that the Hindoo soldiers, among the Sepoys who accompanied Sir David's army by this route, imagined they found in Denderah a temple of their religion. Some allusions have already been made to this subject; and after what has been advanced, it may not appear surprising that an Indian idolater should feel devoutly inclined on entering an Egyptian temple. In the sacred edifices of both countries the same general rules were observed. Nature is distorted. In India the human form is surmounted by the head of the elephant; and in Egypt also the Hindoo found it united to the inferior animal. A colossal head, which commanded his awe and respect in the cave of Elephanta, would here be found in the pillars before him. The timid voyager, after his perils on the Red Sea, and his toils in the Desert, might offer a prayer to his god of stone, amidst rock-hewn deities. We are told that Christians, who rounded the Cape of Good Hope with Vasco de Gama, performed their devotions in an Indian temple, on the shores of Hindostan. The ancient Indian would more readily have recognized a resemblance to his sacred edifices in the rock temples of this country. The lingam is seen in all, and is a never failing token to idolaters.

To prosecute the voyage, either up or down the Nile, there will be no difficulty at Khennéh in obtaining *djermes*, boats which have a single mast, are partly decked, and afford comfortable accommodation for two persons. A larger class of boat, called a *maash*, having two masts, and a cabin within another, is more difficult to obtain. The latter accommodates four persons. Every description of boat is infested with vermin, and ought to be sunk for a couple of days before being used. For the first of these travelling accommodations to Cairo, 15 or 20 dollars will be demanded; for the other, 8 or 10 dollars more is expected. A dollar may be valued at about four shillings sterling. All arrangements will be made by the native agent, who is of the Coptic tribe; a race of men who, whether from interest or not, are found most useful and accommodating.

The dispatches which I had conveyed to India were of a nature that permitted me to forward them after arriving at Luxor. This I had done by one of the party who was proceeding direct to Alexandria, where the British Consul resides. I had much pleasure in joining my countrymen, whom I met at Khennéh, and in accompanying them in a vessel of the largest description. I had merely seen and marked the form of some objects at Thebes, that seemed to have gained on my affection by separation. It was therefore an additional gratification to me, that this arrangement would cause me again to visit, for a few days, that interesting scene.

On the 10th day of January we left Khennéh at 8 P.M. to ascend the Nile. The next morning we passed Keft (the ancient Captos) on the east bank of the river. This was at one time the great emporium of trade between the eastern and western worlds. At 12 o'clock we were opposite Negadeh, a

DENDERAH—TEMPLE OF ISIS.

village on the left bank of the river, containing a population of about 300 families, the larger proportion of whom were Copts. About midnight of the 11th we reached the bank of the river, near the sycamore-tree at Gournou. The voyage up the stream occupied about double the time of my descent to Khennéh.

It was with much pleasure I made a second pilgrimage to objects already adverted to. If the visits were repeated for months, there would be a fruitful source of instruction and delight for the observer. I felt more assured, in reviewing the sanguinary scenes in the temples and tombs, that these punishments were meant to represent the future state of the wicked, as we at present are made familiar with pictures of the infernal regions. The processions and scenes of rejoicings in which the gods preside, were, in the same way, intended to typify the glories of a future reward.

My friends had taken a cursory view of the ruins on each side of the stream, and we left the shores of Luxor on the night of the 16th. We passed Khennéh the following morning without stopping. The river here turned with a sharp angle from a northern course to the westward, and continued to run thus till reaching Hoo on the left bank. At Hoo there are some interesting remains of Diospolis Parva. Farshiout is the next place of any note; it is three miles inland, and is the capital of a rich province, which produces fine sugar-cane. On the 18th we reached Girgeh, which appears to have been a town of consequence. It was formerly the capital of Upper Egypt, but is now on the decline. It still contains seven mosques, and a Catholic church; the priest of the last informed us there were 230 Catholics there. The church is a gloomy building, and its inspection afforded us little pleasure. There was a shuffling, beggarly manner about the ghostly father, who, however, I must say in extenuation, appeared to be miserably poor.

There is an excellent bazaar at Girgeh, at which we replenished our supply for the voyage, and proceeded in a few hours, having been informed by the priest that nothing was to be seen worthy of research at Abydos, which lies about six miles from this place. The information obtained by travellers through the people of this country can never be depended on, as will be evident from the following circumstances, with which I was unacquainted at the time:—At Abydos there are remains of two large temples, one of which Pococke holds to have been a palace of Memnon. It presents much to repay the visitor, more particularly if he be not familiar with the temples at Thebes. The colouring on the walls is fresh. Some valuable relics have been collected here, and among them the famous hieroglyphic tablet of Mr. W. Bankes, containing a genealogical list of kings. Below Girgeh the Nile is encroached upon by a mountain projecting from the east. There are numerous excavations made on the side of it, probably intended to serve as a necropolis to some ancient city. During the voyage on the Nile one may land at pleasure; and there are innumerable villages, displaying a variety of appearance, but having no novelty to repay the trouble of disembarking. As many as a dozen or twenty may occasionally be seen at a time. Some are so insignificant, and the names given them by the boatmen so variable, as to account for the circumstance, that on this point all charts of the country differ. In the outline chart that

accompanies this work, only places that have decided interest to the European, or superior claims to recommendation have been inserted. In the course of our voyage we saw several crocodiles, on sand banks, looking like trunks of trees; at first we doubted their reality, but were convinced by whistling a ball in the direction, which caused the animals slowly to move down the bank, till with a splash they were embedded in the river. They are not often seen in the Nile below this latitude.

Menchia, which stands on the west bank, has a good bazaar and a quay of a character that shows its past importance. Nearly opposite to Menchia is Echmim, a capital of a province and a place of consequence, having a population of 10,000 persons. Its manufactures and bazaars are extensive, and the neighbourhood is productive. The remains are trifling, but there are innumerable grottoes in the neighbouring mountain that court investigation and appear but little known.

On the 20th we found ourselves at the foot of a mountain 3 or 400 feet high; it takes its name from a tomb of Sheykh-el-Hareedee, which is seen here; there are the remains of a colossal statue. The hill abounds in caverns, now the resort of jackalls; one of these excavations is 255 feet in front, 168 deep, and 16 high, and its interior is divided by twenty-four pillars, 15 feet square; it contains a few rude figures of Osiris. Numerous pieces of crystal are scattered about the wild mountain, which is ascended with difficulty. The *rockham*, or vulture, frequents the spot. Sir Frederick Heniker says of this place, "Here is at once the scene of Sinbad's valley of diamonds, and the rock bird." We passed a village called Tahta, on the left bank: it is far enough from the river to have with its mosques and minarets an imposing effect. On the opposite bank we skirted by Gaw-el-Kebir, the site of the Antœpolis, which is mentioned by Hamilton, as distinguished by a temple with large pillars, having a picturesque appearance in a grove of palm-trees.

On the 21st we passed on the left the large village of Abautij, and soon after we arrived at Siout, on the same side of the river. Siout is the capital of Upper Egypt, and is supposed to stand on the site of the ancient Lycopolis, (or city of wolves.) The town is divided from the river by a causeway for a mile and a half. At the landing place there are considerable buildings, and a stir of business announcing this to be a thriving locality. The embalmed bodies of dogs are found here. Tombs and excavations exhibit paintings and sculpture, that make them deserving of a visit if the superior curiosities at Thebes have not been previously explored. The *effendi*, or governor of Siout, was Scheriff Bey, a relative of the Pacha's. His palace with gardens is prettily situated besides the town, with high ground rising in the rear. There are ten or twelve mosques whose spires outtop the mass of brick houses contained within a wall that runs south of the palace. A cotton manufactory stands on the north side of this building. Mules were in readiness to convey travellers to the city; there was a dragoman who conducted us, and as all Franks are exhibited to each other in this country, so we were escorted to the palace to visit an Italian doctor in the service of the governor. Two regiments of infantry recently returned from Greece were at Siout re-organizing. The commanding officer of one, a soldier-like Turk, spoke of several British officers he had met in the Morea, and if I might judge

from the interview I had with him, the good feeling he expressed must have been reciprocal. He politely took us to his parade, where the regiment was assembled by beat of drum; fifes were also in use. The privates were mostly Arabs of Upper Egypt; there were a few finer men of a darker cast from beyond the cataracts. There is much to be done yet before the children of the Desert can be trained to the simple but important routine of soldiers. Their dress and accoutrements were uniform and European; they had the firelock and bayonet; but cleanliness, the distinguishing mark of a good soldier, was not attended to. The buff belt seemed not to have known the benefit of pipe clay; a step, however, towards a grand system has been achieved, and a few thousand men, organized and disciplined, will become a formidable machine against their wild countrymen. A new generation may be necessary to give these troops the name of an army; but the change is in progress. The whole system of drill is European, and most of the instructors are French and Italian. The regiments had a walled barrack, from which the families of soldiers were excluded; and here is the secret impediment that must check, until a total alteration of manners takes place, the ready organization of Eastern troops. We saw several Turks with their large figures, made larger to the eye by their loose attire. A solitary Mameluke was pointed out; there was a striking air of manliness and ease about him, his eye spoke much, and he seemed to say—

"I stood, and stand alone, neglected or forgot."

This race of strangers, who so long governed Egypt, were successively domestics, confidential servants, treasurers, and collectors of taxes. The following morning we visited the extensive and well-stocked bazaars, and rode through the narrow streets of the town. Siout contains a large caravanserai, and is a great emporium of trade with the interior of Africa. The merchants of Darfour and Sennaar annually exchange in it several thousand of their fellow beings, chiefly women, who are added to the ivory, gum arabic, &c., to balance their expensive mode of caravan trading, to procure clothing and other necessaries of life. We had rain and cloudy weather, which were said to be of most unusual occurrence in this part of Egypt.

The thermometer ranged from 58° to 65°, a delightful temperature when reposing in the shade, enjoying the cheering influence of the sun without encountering its rays. Before casting off from the bank at Siout, where we lay with about thirty other boats, we had the pleasure of seeing an English lady, who with her husband was stemming the Nile. They were about to encounter all the inconveniences that must attend a voyage to Bombay before proper arrangements are made for it. There was a degree of comfort and neatness diffused over the cabin of the little *cangia* that made it appear an agreeable retreat. The novel sight of a female in her station in society brought us for a short time to think of our own homes. The feeling passed off, and it appeared as if we had witnessed an optical illusion. We proceeded on our different routes, having been assured that the novelty of all around was a recompence for the inconvenience of living in an apartment three feet in height. We observed Manfalout on the west, a large town in a fertile country, where much attention is given to irrigation.



the city, intersected by towers, and entered by highly ornamented gates. The road becomes studded with passengers, mounted on fine mules, and dressed in such various costumes, that the traveller is led to think he is about to find his warmest anticipation of "Grand Cairo" realized, a feeling which is heightened by the appearance of the noble portico he passed through. His flights of fancy are sadly lowered as he finds himself winding through narrow streets with mean-looking buildings. Occasionally the residence of some fallen Mameluke is distinguishable by the broad red and white lines which cover it. It has only a high wall that adds gloominess to the path, and no opening is seen to ornament the street. The most striking feature in the city is the large square of Esbequier. Many houses are in a ruined state, and there are some of stately appearance that lead the imagination to picture captive beauty pining amidst the trees and shrubs which overtop the walls. Not far from this square, in the Frank quarter, we found the abode of the acting British vice-consul. The traveller, whatever may be his nation, will obtain through such a channel all requisite instruction for further guidance on his route. A dragoman can be procured to arrange and to attend the movements of a party during their residence in the city. An obliging and faithful companion will be found in Osman, a Scotchman, in Turkish costume, said to be a Mohammedan. In the streets of Cairo are variety and novelty sufficient to afford daily amusement to a stranger. The bazaar is an endless scene of interest.

Cairo, from its situation, the natural mart for trade between the eastern and western worlds, is the seat of commerce with the interior of Africa and Arabia. There are market days when the streets are packed with a multitude of people, of all colours and of all nations. Any man wishing to dispose of an article exhibits it above the heads of the people, calling out the offer of the last bidder, and walking at the same time from one extremity of the crowd to the other. The number and variety of articles exposed for sale, and the consequent noise and excitement, present a most curious combination. There are lateral streets, where the most valued goods are found, and where extensive manufacturers, cutlers, embroiderers, &c., have well-stocked stores, with a goodly display of the produce of their different crafts. My wanderings led me to the slave market, where some hundred expressive eyes rolled towards me, in the expectation of each new-comer becoming a master. The poor wretches stalled here for sale were mostly females, of true African black. They were seated in groups, and probably were distinct families, taking advantage of the time allowed for the interchange of the affections before they came to be separated. A few cargoes of British manufactures exchanged at a port of Abyssinia for African produce might prevent a great part of a traffic, which I believe Major Denham mentions that some chief in the country deplored the necessity of continuing.

The castle is the first place to visit at Cairo; its fine position overlooks all the objects worthy of remark in the vicinity. It is situated on an under feature of Mount Mokattam, by which it is commanded. Towards the town it is secure from hostile approach, and is every where protected from escalade. From the town to the castle the road is steep, and barely admits of safe approach on horseback. The interior of the fortress presents a large space. The principal building is a palace of the

Pacha; there are also a mint, an arsenal, and other public works, which give a considerable show of bustle. Many improvements are now going on, and the early works of the Saracen Sultans are disappearing in order to effect them. Joseph's Hall and Joseph's Well are amongst the monuments of the proud days of Cairo; the former is now giving way to a fresh erection, and the ancient monuments that were brought hither from Memphis are to undergo another displacement. Those works were executed in the twelfth century under the Sultan "*Salah-ad-din*," known as a destroyer of infidels. Egypt naturally calls to mind the patriarchal era, and the well is fondly connected in name with earlier times, but its construction belongs to Yussouf, said to be secretary to this Sultan. Cairo, like Alexandria, records one of the great revolutions which this country has been doomed to undergo; it was founded nearly a thousand years back, and possesses many relics that mark the power and splendour of the early Mohammedan conquerors. Few spots are more interesting to the spectator, than the ramparts of the castle. To the west the pyramids awaken recollections of the past, and point to the vicinity of departed Memphis, whose boundaries are lost in the mists of countless centuries. The towns of Bulaq and Djizeh, with old Cairo and heaps of ruins, are in the middle ground. When the eye turns to the right, a solitary obelisk marks the site of Heliopolis, near which is Meterieh, and recalls the days of Pharoah and of Joseph. To the north-west, the tombs of the Caliphs, with their domes and minarets, rise like a city from the waste. Amidst these scenes, speaking of so many distant and interesting ages, is observed the Nile, flowing as it always has flowed. The green foliage of the Island of Rhoda affords a pleasing relief to the sadness of devastation. An aqueduct running towards Cairo marks how despotic sway will effect the removal of a city, though the inhabitants be withdrawn from the enjoyment of the first blessing in an Eastern land. The fore-ground of this noble picture is well filled up by the city lying at the base of the citadel, and displaying amidst countless houses some splendid mosques that triumph in their magnitude. One of the most conspicuous is that of Hassan, at the foot of the fort. The noble gates which lead from the new city are bold and striking specimens of Saracenic architecture. Amidst this pile of modern structures, innumerable are the columns and remains taken from the ruins of the ancient cities. Descending from the castle, a gate perforated with balls, tells of the time when the power of the Mamelukes received its final blow. About a mile from Cairo are the remains of the old city, called Fostat, or Misr, or Babylon. Here is a Christian church, presided over by a Greek patriarch, and you are shown a low cave, said to have been the refuge of Joseph and Mary with the infant Jesus. There are some curious relics and antique pictures attached to the convent. On the road there is a court of very large size, known by the name of Joseph's Granary, the origin of which cannot well be accounted for. Grain is stored within it in heaps, and without covering, that not being necessary to preserve it.

An excursion must be made from Cairo to the Caliphs' tombs. They are enclosures, with a minaret at each angle of one side of an oblong, and domes at the other. The interior has deep verandahs, supported by columns; they are of limestone, and taken altogether are a great effort

Within a few miles are remains of Hermopolis, of which a fragment of a temple with a few columns are all that now invite attention. Before approaching Manfalout, the mountains on the Arabian side are bold, and extend near the river, showing innumerable excavations. After leaving Manfalout, the same character of mountain continued with the same kind of perforations. These hills take the name of Sheykh-Saeed, from his tomb being there. On the opposite side of the Nile the canal called Bahr Yussouf branches off, running nearly parallel with the river, and tending to keep the Desert from encroaching on the cultivated land. Approaching Malawi on the west, the effect of the irrigation of the river by means of canals, is made evident by the fertility of the country and the rich returns of cultivation. Sugar-cane is raised in the neighbourhood; and a few miles further down there is a rum and sugar manufactory. On the opposite, or east bank at Sheik Ababde, are ruins of a city founded by the Roman emperor Hadrian, in honour of his favourite Antinous, who sacrificed his life for him at this place. The ruins were extensive a few years since, but they have been removed for building materials to Cairo or Siout. There are Grecian and Roman fragments mingled with Mohamedan tombs and ancient catacombs. At the village of Ashmooneyn, a mile and a half from the Nile, a portico ushers the traveller to ruins that cover an area of nearly four square miles. Like most of the ruins below Thebes, these seem to have been but little explored; they were visited and described by Mr. Legh. Below Ashmooneyn, on the right bank, are the excavations of Beni Hassan; we passed them at night, they are said to be of beautiful proportions, with columns of the order usually called Sicilian doric. These temples bear a very early date, and show the prefix or name of Asortoson, who is supposed to have existed some centuries before the siege of Troy. Mr. Hamilton describes the grottoes as of great magnitude, the walls and pillars being covered with coloured representations as at Thebes. Among the subjects pourtrayed are the culture of corn, hemp, and flax; the manufacture of arms and ropes; fishing, hunting, dancing, wrestling, sham-fighting, &c. These caves are no doubt attractive, and it was only in consequence of finding ourselves in the morning as low as Meniah that prevented our return. This disappointment determined me most strenuously to advise travellers not to give way to many plausible reasons the natives will assign for hurrying on.

On the 24th we reached Meniah, a large town, with a considerable degree of bustle, and having a good bazaar and better houses than usual. Fragments of ancient buildings were discernible in the mosque. Portions of granite columns formed into grinding stones were for sale, shewing how little respect is paid to the most valuable relics. At Mineah we saw about seventeen boat loads of implements, with English artificers and miners proceeding to explore the country above the cataracts, and to search for coals and other minerals. Some of the men had wives and children, and the whole seemed like a joyful party proceeding on an excursion of pleasure. There was no bad feeling or jealousy evinced on the part of the natives, who seemed rather to invite the enterprise and useful qualities of Europeans. They had lived well, and appeared most orderly in their conduct, which so far was highly creditable to their country. We gave them our good wishes at parting, and left them in high spirits. The

Pacha's enterprise is conspicuous here in another cotton manufactory. The next place to be remarked is the high cliff of Gebel-el-Teyn, on which there is a Coptic convent. Lower down on the opposite bank, removed from the view, a miserable village stands on the site of Oxyrinchus, the ancient capital of a fertile district. It is now nearly overwhelmed by the encroaching sands, and is not worth visiting, except with a view to mark how a fertile country may be transformed by neglect.

On the 25th we passed Feshn, on the western bank, a little inland. The river here displayed more bustle, and there appeared to be some good houses. We next arrived at Banisouf, a large but dirty town, where the province of Faioum is approached by a break in the Libyan chain. At Faioum was the famous labyrinth, the parts of which Herodotus says were greater than other human works, equalling if not excelling the Pyramids. A lake, said to be equal to 277 miles in circumference, and 36 fathoms in depth, was entirely excavated by the hands of man. Belzoni found traces here of pyramids of temples and of cities, that go to verify the details of ancient historians, till lately almost treated as fictions. If the works of the Egyptians are examined with fairness, they will justify all that has been stated of their wondrous character for persevering labour. The Lybian chain soon closes again towards the Nile, and forms the site of the Pyramids. On the eastern side the mountain nears the river, and has a deep declivity, with the appearance of excavations, which probably were connected with the ancient Memphis. A wind from the east carried us rapidly along, and on the morning of the 26th the Pyramids of Dashour were in sight, about twelve or fourteen miles distant. They stand high, and I think in passing them on the river they had a more striking effect than is conveyed on the near approach to such masses. A succession of Pyramids came in view, and were the only objects that varied the sombre uniformity of the sterile desert. The shore on the east, or opposite bank of the river, has a road on its bank, which is enlivened by passing travellers.

The like appearance continued as we pursued the voyage, and came near the pyramids of Djizeh, which are on the same range of hills as those described. Opposite Djizeh the quarries are very extensive, and said to be those from which the stone for the pyramids on the opposite side of the river was taken. From these excavations the mountain derives its name of El Mokattam, (the hewn.) As we drew near to Cairo, on the right bank of the river, we saw numerous tents; and after passing some handsome palaces and extensive environs, we arrived at the part of Cairo, called Bulaq. A noisy and bustling scene awaited us amidst a fleet of boats, in front of four hundred or five hundred houses that line the bank of the river. The new comer finds that his further progress must depend on his own exertions, until by one of the motley group of Arabs, Turks, Copts, Jews, and Franks, that surround him, he is recognized as a countryman, when he experiences no further difficulty in providing a carriage for himself and baggage to proceed to Cairo. Mounted on a donkey, which whisks him through the narrow streets of Bulaq, he is soon taken clear of the town. The journey for the intermediate distance of two miles is performed over mounds of rubbish, which for some time conceal the minarets of Cairo with its citadel rising above them. A closer approach discovers the walls that surround



Drawn on stone by A. Hodder, from a Sketch by Capt. C. D. M.

A. Hodder

VIEW OF SUEZ.

Taken from the North East

A. Hodder, from a Sketch by Capt. C. D. M.

of skill. The whole building is relieved and ornamented with a variety of elaborate architecture, and painted outside with alternate lines of red and white. These tombs now neglected, and going to decay, are the resort of a few Arab beggars. Beyond the tombs the road crosses the Desert about four miles, to the village of Meterieh, where are stones with hieroglyphics on them. In an adjoining garden there is a wild fig-tree with an enormous trunk described as another resting-place of the Holy Family. A little beyond the village is the obelisk of Heliopolis, composed of red granite, and displaying a row of hieroglyphics, to a height of 65 feet. It tells a melancholy history, well described by a modern writer. "A barbarous Persian has overthrown her temple, a fanatic Arab burnt her books, and one solitary obelisk overlooking her ruins, says to passengers,—Heliopolis." This place claims particular notice. Herodotus was there instructed in Egyptian lore, and the inhabitants, he says, were deemed the most ingenious of all the Egyptians. There are quantities of Egyptian pebbles on this route, and large pieces of apparently petrified wood. On the opposite side of Cairo are tombs of Mamelukes and Osmanli nobles, including some members of the ruling family, which are well worth seeing. During the few days I had been at Cairo, there was rain sufficient to cause great inconvenience to persons whose time was limited. The thermometer averaged 54° at eight A.M., 58° at mid-day, and 56° in the evening. An Indian at such a time will prefer a cloth dress to the light clothing of the East. Europeans who reside at Cairo, and who make excursions, find it convenient to wear the Turkish costume, which is entirely of cloth and not uncomfortable.

I had assumed this clothing as best suited for a projected expedition to Suez and to Mount Sinai, in which I was happy to join with a British officer, who chanced to be at Cairo, contemplating the journey. Dispatch was an object to both parties; we therefore hired four dromedaries, or trotting camels. We took one each, and mounted a Greek, who spoke Arabic, on a third: the fourth was appropriated to an Arab Sheik, who engaged to be a safe-guard and guide to the party. An Arab led a camel, carrying a small tent and some water with a few requisite articles. By continual travelling he was to overtake the party each night. Thus arranged, in light marching order, we started, on the 1st February, through Bab-el-Hassar gate. Issuing from Cairo, the Desert is at once entered on, and offers no obstacle to the direct advance of a caravan towards Suez. To the right the Caliphs' tombs are conspicuous, and on the left of the road there is a small Arab village connected with the caravans. Here our final arrangements were made, soon after which we found ourselves on the wide waste. The road is more uneven than in the valley of Cosseir. Suez bears nearly east from Cairo, but occasional projections from mountains on the right cross the road, and cause some deviation from the direct line. There was nothing to impede the regular advance of our dromedaries, which kept up a shuffling gait, and travelled about four miles in the hour. During the day's march, which occupied eight hours, we met one caravan. A gradual ascent was evident throughout the journey. The following morning we arrived in an hour at the tomb of a Sheik, situated half way to Suez. Innumerable pieces of rags, left in it as reliques, show that it has accommodated many travellers. A mile beyond the tomb to the right of the

CAIRO.

road, a mound points out the site of a well which is waterless, although sunk to a depth of 200 feet.

The country to the right became more mountainous during the march, and had projecting features that lessened as they approached and crossed our path in continuance towards the Isthmus. The most elevated part of the road is about midway between the Nile and the sea of Suez, from which point a very gradual descent may be traced on either side. Towards the termination of this day's journey my companion unluckily fell, in consequence of a start made by his dromedary, and was only able to proceed towards Suez at an easy walk. We passed a fort-looking place at Adjerout, a couple of miles to our left, and about ten miles from Suez. A large tank, overflowing with brackish water, about two miles from Suez, next attracted our notice. The latter part of our journey had been very slow, but we had no difficulty in completing the march from Cairo in two days.

Innumerable round stones with a rough surface lie strewed over the Desert; they are of the kind called Egyptian pebbles: frequently they are broken, and the variety of their colours catches and pleases the eye of the traveller, who ought to be provided with a hammer for the purpose of procuring specimens, many of which are very beautiful. The Desert of Suez has no marked station where a halt is desirable; it is one dreary waste, with rounded hills, of a calcareous shelly texture, mingled with some clay. They are quite dissimilar in figure, to the bold outline of the granite mountain in the valley of Cosseir. A few antelopes and partridges were seen during the journey, and some stunted shrubs that caught the dew drops. The thermometer in the Desert was at night at 56°, in the day it was at 62°. The nocturnal cold and damp would be much felt without the shelter of a tent. The whole distance by the frequented route is about seventy miles, which is generally divided into three marches. Camels, mules, or horses, may be used, and the surface is sufficiently firm for artillery. A new feature has recently appeared in the discovery of water in the midst of this Desert, which will be more fully alluded to on the return to Cairo. We were stopped by a Turkish guard at the gate that leads into Suez, but were soon permitted to continue our route, which led over rubbish to a town of most irregular form, skirting the border of the sea. We here experienced the same civility and attention from a Coptic agent to government, as at Khenneh. He afforded ample lodging as regarded space, but when convenience and comfort were required, they were totally wanting. If the air was excluded, the room was darkened. I had serious apprehension for my unlucky friend, who evidently required bleeding; but venesection was too difficult an operation for the skill of the natives, who resorted to a simple process that formed a good substitute. A cow's horn was pressed on the part from which blood was to be taken, and a man was enabled, by sucking through an opening at the point, to draw out the air. A piece of leather was dexterously slipped over the opening when he withdrew his mouth. The leather being removed, in a few minutes the horn came off, and discovered the flesh that it had rested on completely deadened. The skin was then scarified with a razor, and the same process of suction was frequently repeated, each time bringing a large portion of congealed blood into the bottom of the horn. By this simple method, pain was removed, and the patient was enabled to get repose.

VIEW OF SUEZ.

THE view of Suez is taken at low water. The sand bank on which I stood, together with a large additional space, is flooded at high tide, a period when the sea assumes a formidable appearance, being three miles across. At the fall of the tide its breadth is reduced to a quarter of a mile. The present town of Suez comprises a few hundred storehouses, with a quay for fitting out vessels, which range in size from 150 to 450 tons, holding from 400 to 1200 erdebs of wheat, each measuring fifteen bushels. With such craft the trade of the Red Sea is carried on. There can be no doubt but the Desert has encroached considerably on this part of the coast, and has totally altered the character and appearance of the country. A bar of sand that crosses the channel below Suez reduces the depth of water at low tide to three or four feet, and it is never more than ten or eleven. There is an outer harbour within four miles, with anchorage for vessels of any size. The distance offers no objection, as the town has no recommendation in itself. Cattle for transport are always procurable. Supplies of food are brought from Cairo. The wall that extends behind Suez was built by the French when they occupied Egypt; it tends to check marauding parties of Arabs. The wells in the vicinity supply brackish and bitter water. The best is found at the wells of Moses, the position of which will be seen in the Map; they are seven miles from Suez by water, and double that distance by land. Tradition says, that at these wells Moses watered his flocks. About five miles in a N. E. direction from Suez, the sea terminates in a canal, the bed of which is 115 feet across, and filled with drift sand, forming a level with the adjoining country; but the banks are distinct, and are now ten feet above the Desert. Strabo mentions this canal as having been made by Sesostris, of a depth for large vessels, to connect the two seas. Traces of it are found in the Desert. It is supposed to have been connected with the Lake of Pilgrims, near Cairo, and to have extended in length to ninety miles. As a place of trade to the natives of the country, imperfect as they are in nautical science, Cosseir is much preferable to Suez.

The north wind, which prevails in this latitude for eight months in the year, renders navigation of serious consequence to an ill-organized marine. A very short time may make a material change in the importance of this place by the introduction of European science into Egypt; and if we consider the facility the country affords, with the assistance of steam as a medium of communication, improvements will probably proceed, until England finds the produce of the Eastern world arriving in her markets at a cheaper rate than they can be furnished by the circuitous route now in use. The canal alluded to furnishes for many miles a bed for a rail-road, which, if continued north to the Mediterranean shore, would connect the navigation of the Eastern and Western Oceans by a ready mode of transit of less than eighty miles. The same convenience would furnish a prompt supply of fuel and material for a fleet in the Red Sea. In turning one's thoughts to this speculation, it should be remembered, that it was not the discovery of the passage by the Cape of Good Hope that diverted

the trade of India from its ancient channel through the Red Sea, but the relative political position of the governments of Egypt and of Christendom at that period. It may, therefore, be well to consider if the more natural route will not again be resumed, and how mischievous consequences contingent thereupon may be averted. It appears reasonable to think that the latter may be obviated by a close alliance with the government of Egypt; a line of policy not the less commendable, if we consider that the aggrandizement of Egypt will materially check the influence of the power which at present possesses paramount influence in the councils of the Divan, and is extending its influence south and east. An invasion of India from Egypt was talked of by a ruler now no more, who it can scarcely be supposed seriously contemplated it, without the previous occupation of Syria. O'Meara makes Napoleon say, "Egypt once in possession of the French, and farewell India to the English." The extended line of operations would appear to render the success of such a measure more than doubtful.

A few miles from the canal there are mounds, which bespeak an ancient site of civilization. I found an avenue lined with fragments, whose tops are left uncovered by the drifting sand. It had a desolate appearance, and is the supposed remains of Arsinoe. A large sunken space marks the probable existence of a harbour. It is melancholy to ride for miles, unencountered by a living thing, and to see monuments of a once flourishing city. It was in the neighbourhood of Suez the Israelites encamped, and from it they hurried away on the approach of the unrelenting Pharaoh. Tradition has indicated the place where his army attempted to cross the sea, and the Arabs say the water has always a ripple that marks the passage. To the east of Suez lies the Desert of Sinai, with its sacred mount. This country is inhabited by the descendants of Ismael, and "they are a wild people." But there is no obstacle to the Christian's visiting the sacred territory beyond the fatigue attendant upon the journey. This will be removed when the sea of Suez becomes a place of resort; and if the traveller land at Tor, the convent on Mount Sinai may be reached with little inconvenience. Tor is sometimes the landing-place of pilgrims returning from Mecca. It affords abundance of excellent water, and the necessary convenience for prosecuting the journey. The Desert of Mount Sinai, like that of Suez, is now completely under the controul of the Pacha of Egypt, and the traveller has little to fear in either from interruption. A height of a few feet of sand separates the sea of Suez from the salt marshes, said to be fifty feet below the level of the waters of the Red Sea. The same sea is at high water forty feet above the Mediterranean, from which it is distant little more than seventy miles. The former circumstance may account for the numerous conjectures regarding the canal, and its non-completion from the timidity of the monarch who projected it, and to it, no doubt, is owing the circular direction of the canal to a part of the Nile near Cairo. Locks probably were not known to the Egyptians, who had reason to fear the consequence of opening a



morning by an approaching khamseen, the south wind so much dreaded by travellers. Those who have seen a snow-storm will be able to imagine a khamseen; but they must add the lonely feeling and dreary effect of encountering it on an ocean of sand, whose drifting particles threatened soon to bury even the tent. It was only by considerable activity we were enabled to save the various articles belonging to us, which were quickly arranged on the camels, when it became necessary for us to mount, and keep in motion. The path was soon lost to the eye, and the drift thickened so as to make us huddle together to avoid total separation; we were led by the Arab, who was guided by the direction of the wind. No situation could for the time be more desolate; and if such storms continued for more than a few hours, the passage of the Desert would be impracticable. At mid-day the gale had ceased, and a bright sun shone on the crescents which surmount the minarets of the Moslem city. A caravan was assembling near the tombs of the Caliphs, hundreds of camels were already there, and the whole plain towards Cairo was strewed with others hastening to join the multitude. Many litters were borne on poles passing over the saddles of two camels, managed as we do sedan chairs in this country. The contents of these were studiously concealed. Women and children were contentedly seated on the luggage, or in panniers. There cannot be a more animating spectacle than a caravan preparing to start. Each person is busied with his own affairs; the master, the slave, and the driver, have each an equally important office. They are about to take a journey where no reposing point is to be expected on the route; their wants by day and night must be equally attended to, and a man who thus travels considers the whole country alike his home. It is a description of life suited to Eastern countries, where the occupation of the merchant and pilgrim seem ever to have been in common. I soon found

SINCE the first part of this Journal went to press, I have been so fortunate as to procure a further detail of the discoveries and experiments made by the engineers alluded to, and am now enabled to give their investigation of the two routes noticed in this Journal, and traced in the Map, as connecting the Port of Cosseir, on the Red Sea, with the Nile. The engineers are retained in the employment of the gentleman personally mentioned as the stimulator of their valuable labours. They went from Cairo to Upper Egypt, last year, (1831) and the following is, in substance, the interesting remarks made on the occasion of their exploring the desert of Cosseir. Proceeding from Khennéh, on the east bank of the Nile, in the direction of the Red Sea, the first halting place is called Bir Amber, and is on the borders of cultivation. Here there is an abundance of water supplied from the Nile. The next station on the same route is Legayta, separated from Bir Amber by twenty-one miles of desert. At this place the engineers found seven old wells, rendering different qualities of water; of these they repaired three, and were most successful in sinking a new one. They first worked through six feet of hard ground, and found sandstone rock, which they excavated to a depth of twenty feet. The diameter of this well is 6 feet; its sides are built with brick, down to the rock, and it gives a supply of above 150 cubic feet of water. One of the old wells, 8 feet in diameter, and 10 feet deep, was continued for 8 feet, through sand rock, and there is at present generally from 7 to 8 feet of water. Another well, of the same dimensions as the above, which is good water, was also deepened 8 feet, which increased the flow of water from 5 or 6 skins full per night, to a column of water 8 feet in height.

Having thus procured for the place as large a supply of water as the present demand can require, the engineers terminated their labours at Legayta, satisfied that the quantity may at any time be increased. Proceeding from Legayta to the Red Sea, by the north road, for twenty-eight miles, they arrived at Hammer-Mart: here there is a well 15 feet in diameter, with 104 stone steps, winding to the bottom. The engineers deepened the well through rock for 4 feet; after which, with a bore of five inches diameter, they went to a further depth of 35 feet, making the distance from the surface of the valley to the bottom of this well not less than 108 feet. Notwithstanding their exertions, they failed in obtaining water. The quantity the well produces is very trifling, and only fit for cattle. A remarkable feature in this instance was, that appearances at the surface favored the presumption that a quantity of water might be found. Ten miles beyond Hammer-Mart they reached another well, called Bir-a-Cid, which produced only one skin, or about three gallons of water in a night. This well was deepened from 6 feet to 14 feet, and increased the flow of water to four skins per night. The engineers determined to return and pursue their labours at this place, where appearances give every promise of further success. Continuing their route for 22 miles, they arrived at a spot called Haut-Suliman, where there are indications that lead to a relief of water being procurable from a vein of sand rock. Here it is

myself within the gates of Cairo, having made the journey from Suez at the caravan rate in three marches, with twenty-eight hours' travelling, the distance, as already stated, being about seventy miles.

On the morning of the 9th of February I departed with Osman, the never-failing friend of the English traveller, for the purpose of visiting the pyramids nearest Cairo. Mounted on donkeys we trotted to Old Cairo, from whence a ferry-boat crosses to the village of Djizeh, on the west bank of the Nile, which has here a breadth of about a thousand yards. The passage skirts the south end of the Island of Rhoda, where stands the Nilometer in a castellated ruin. A graduated scale marks the height of the river. The Nilometer directs the ceremony, when, according to ancient custom, the inhabitants and authorities meet to celebrate the rise of the Nile to a height that overflows the country. A bank is then opened to let this gift of Providence extend itself, by means of the canal, through the city of Cairo. The people acknowledge the benefaction with loud rejoicings and merriment. The ceremony takes place about the middle of August, but the river continues to rise for a month after. The parched soil is soon made to change its melancholy hue for the rich carpet of verdure the inundation ever brings forth. From Djizeh the distance to the pyramids is varied by canals, which, intersecting the road, and conforming to the periodical changes of the river, may extend the journey from four or five to sixteen or twenty miles. The river was low when I made the excursion; canals and cultivation caused considerable deviation from a direct line, and I could not reach the base of the pyramid of Cheops, or that nearest Djizeh, in less than three half hours, having gone a distance of about six miles. Strangers are met and pestered by numbers of Arabs anxious to be employed; it is necessary to proceed with them in a severe and determined manner.

intended to excavate at least two wells. Fourteen miles from the last-named place the two wells of Bir-Inglis were found, and produced water but of a bad quality. It is intended to clean them out, and otherwise to improve their present state. Between Bir-Inglis and Cosseir there are three springs, from which a considerable supply of water flows, but of so bad a quality as only to be used for camels. It is found that these springs run through earth strongly impregnated with natron, and appear to take their rise from rocks that are very near. By following the course of these springs, and sinking wells at their junction with the mountains, it is expected that good water will be found. If the engineers prove correct, the vicinity of the spot to Cosseir, by furnishing a supply of water, will materially alter the character of that port, and be of great importance to commerce in the Red Sea.

The attention of the engineers was next directed to Cosseir and its immediate neighbourhood, but no water could be found within less distance than six miles of the town, and it is so bad, that the poor inhabitants only drink it from absolute necessity. Good water is procured flowing on the surface of the rock, and from the top of a mountain, ten hours journey from Cosseir. A situation for sinking a well was selected six miles from the harbour, and here it is expected success will be obtained. The engineers returned from Cosseir to Bir-Inglis, and retraced their route westward from those wells by the south road. The first wells they found were those of Moilah, twenty-seven miles distant from Bir-Inglis; they were found to be merely the receptacles of rain, the supply of which will always be doubtful, as well as its quality, which depends on the period when it stagnates. Three miles further on a well was found, the water of which was so favorably reported of by the natives, that it is thought desirable to make a trial to obtain a larger supply, in case a sufficient quantity be not procurable at Hamrah, which is four miles further westward. At this latter place some good water is at present obtained from a pit sunk in the sand. On the road from Hamrah, and six miles nearer to the Nile, el Wad-el-Gush, there are three wells depending on the rains for a supply, as do those at Moilah. The water was considered good by the natives, and it will improve when the wells are cleaned out. From Wad-el-Gush to Legayta, where the roads again meet, is forty-three miles, and is destitute of water. An attempt will be made to obtain some from hills of sandstone that intersect this line.

From these experiments and their results, and from the various changes in progress in Egypt, there is every probability of that eventful country, ere long, undergoing another revolution, and becoming once more an independent nation. The desire for improvement in their condition, and in their country's advancement, through the agency of foreigners, is a new feature in the Moslem history. It will be satisfactory to Englishmen to know, that a large portion of the blessings of civilization are bestowed by their enterprising countrymen.

channel between the two seas. Had they done so, and caused the waters of the Indian Ocean to flow by this passage to the Mediterranean, the consequence admits of a wide field of speculation. There must have been difficulty in regulating the level between Suez and Cairo, where the Nile at its height is nine feet above the sea at Suez, and at other times as many feet below it. On examining this part of the Red Sea, the latter would seem to have receded, and this is more probable from the whole appearance of the Arabian coast, which has already been remarked. The Island of Camaran is a still stronger proof, as that bed of coral, with its flat surface formed by *zoophites*, rises several feet above the water, on leaving which it is said the insects cease to exist. The re-opening of the canal from Suez by the assistance of modern art would be of easy accomplishment, if the resources and strength of Egypt were matured and well directed. Ships would then reach the Atlantic Ocean from India, by less than half the distance they now perform, and with comparative safety. To accomplish such a project, the days of the Pharaohs, or of the Ptolemies, must again dawn upon Egypt. But there appears a simpler method of uniting the Eastern and Western World, and one within the reach of the present government of the country. The formation of a rail-road across the isthmus to the seas on either side has been alluded to; a proper application of steam power would secure success. More might be said on the subject, which a glance at the Map will prove to be within the bounds of reasonable expectation in this new era of scientific improvement. I cannot too strongly advert to one of the many arguments for turning our attention to this quarter before the field is taken, perhaps, by some formidable opponent. Egypt is making a rapid stride towards independence and power; and, if her growing strength were connected with a European name, it could not fail to influence political opinions throughout the Eastern World. In the present agitated state of Europe a friendly alliance with Egypt, while maritime protection is required by the Pacha, becomes more necessary to England for the security of her Indian dependencies. In the Red Sea it is equally the interest of both countries to preserve a firm and decided footing. The importance of the trade there to Egypt is unquestionable. That country would seem, by its productiveness, to be intended as the granary to the inhabitants of the less favoured lands around, who now, as in the days of Joseph, look thither for supplies.

It is in vain that we search for further information on the interesting tracts that surround Suez. The force of the remark of Malte Brun will be felt by the traveller: "The narrative of the Hebrew legislator, though simple, and carrying conviction along with it, is not sufficiently circumstantial to allow us to entertain a hope of explaining it." All expectation of continuing my journey had been abandoned. A few days' rest at Suez enabled my friend to undertake his return by easy stages to Cairo. Arrangements were reluctantly made to retrace our steps without having accomplished our object. We left Suez on the morning of the 6th with other sensations from those experienced a few days before, when we had promised ourselves a visit to the Holy Mount of Sinai, to see the burial places in the wilderness, and to witness many interesting facts that are in accordance with the sacred history of that place. The very

animal I rode seemed to partake of our feeling, and went sluggishly along at the caravan pace, instead of gaily trotting as he had done through the gate of Cairō. Our rate of march was now reduced to two and a half miles an hour. The first day we travelled for eight hours, when a lonely bush fixed our attention, and induced us to select the spot for a resting-place for the night. The following morning found us moving forward. It was in this neighbourhood where the Desert was soon afterwards to be made to rejoice, by the overflowing of a fountain. The valuable discovery of the essential element was made the year I journeyed to Suez, and was the result of several experiments, conducted under the direction and at the expense of an enterprising English gentleman, residing at Alexandria. Water now flows from a fountain midway between Cairo and Suez, and promises to have the most beneficial result. A village will be formed, and so great a revolution will be effected in this hitherto dreary region, that it will deserve another name. The first experiment was made in 1830, through sand-stone mixed with clay, where no moisture was found at a depth of 160 feet. A second trial was effected a mile from the place of the other, when sand was found to the depth of ten feet; after which, a rock, composed of fragments of silex and jasper, was bored through for forty feet, when a hard rock was approached, which barred the further progress of the instruments. Nothing daunted by these failures another trial was determined on, when a well was dug through sand for eight feet, and a shelly rock was found. By the aid of gunpowder the workmen got five feet deeper, and arrived at a bed of clay with good water rising from it. Lateral galleries have been constructed from the central shaft to the extent of twelve or fourteen feet, and a reservoir of 1200 cubic feet of water is resorted to by the Arabs, who must acknowledge the unexpected blessing with gratitude. Other experiments in progress promise similar results at different points of the route, and in the valley of Cosseir, where, from appearances, there can be little doubt of complete success. These discoveries offer a grand facility to the projected overland route; they are decidedly of the utmost importance. The fountain is about three miles from the chain of mountains that extends across from the Nile to the Red Sea, and which is supposed to be the source of the waters. The following remark on the above discovery appears in the Transactions of the Royal Asiatic Society of this year: "The inhabitants of Africa and Arabia are indebted for all the benefits which they may ultimately derive from a knowledge of this art (boring for water) to the philanthropy and liberality of our countryman, Mr. Briggs, who was the first European who ever thought of applying this art to the discovery of water in the Deserts of Africa, and who, at his own private expense, sent over from England to Egypt the two Englishmen, who have succeeded by their skill in discovering water in the part of the Desert which has been mentioned."

About twelve o'clock we passed the old well between Suez and Cairo, and also a large caravan journeying to the former place. It comprised people of all ages and various nations proceeding to embark for Mecca. It was an amusing sight to see the people following in a lengthened line, apparelled in the bright and motley colours that characterize the costume of Eastern travellers. Having marched eleven hours we encamped in the open Desert. Our rest was disturbed early on the following



VIEW OF THE PYRAMIDS OF GIZA,

from the Summit of that of Cheops

PYRAMIDS OF DJIZEH.

THESE enormous masses stand on a range of hills, upwards of 150 feet above the subjacent plain, which is cultivated to the neighbourhood of their base. The rocks rise abruptly, and there is considerable fatigue in wading through loose sand which has accumulated around them, and veiled a great part of the colossal sphinx passed on the approach. The rising ground deceives the sight when the pyramids are viewed from a distance. The beholder is then astonished to see such a bold outline on the horizon, and it appears to him too vast to be of artificial origin. As you approach there is no scale by which to form an estimate, and it is only on arriving at the base of each pile, and seeing the size of every stone with the number of layers which are formed into steps, that a proper idea can be entertained of the total bulk. I ascended the monument of Cheops, at the north-east angle, by 196 layers of stones; those at bottom were three feet high; about the middle they diminished to 2 feet 2 inches, and at the top they were 1 foot 10 inches, making an average of 2 feet 4 inches for each layer, or a height of 476 feet 8 inches. At the summit there is a space of about 30 feet square, from whence stones have been cast down, and there are displaced blocks that were no doubt to have followed. About 30 feet has been thus abstracted from the original height of the pyramid, which would have attained 500 feet. It must have been a grand scene, fit for the mirthful mood of giants, when the rocks bounded down the sides of the vast declivity. The blocks that rest on the platform are six feet in length, by a breadth of 42 inches, and are of a weight to protect them unmolested by men of the present day.

This pile as it now stands is in altitude nearly 150 feet above the cross of St. Paul's, and is ascended on each side by steps, having their lower layer resting on a space equal in size to Lincoln's Inn Fields, one side being 780 feet. These structures are a proper introduction to edifices found in Upper Egypt, and a key to the architecture of the period when they were erected. An endeavour was then made to command sublime effect by vastness and extreme simplicity. The solid contents of the pyramid of Cheops exceed 75,000,000 cubic feet. The chamber which contains the sarcophagus is 35 feet long, 17 broad, and 18 high, equal to a good sized drawing room, but there might be upwards of 5,000 such chambers within this pyramid. Viewing these masses the soul shrinks abashed and awe-stricken, and reflects upon the countless generations they have seen swept from the earth, and how many more they are destined to survive. Beyond the neighbouring pyramids the eye discerns nothing but shapeless tumuli, and a dreary waste, broken into wild and fantastic hills by the effects of the desolating khamseen. Here there is no carpet of "living green," for the Nile does not extend its beneficent effects to this region of death. He who looks on the dark solitude on the one side, and the bright fertility on the other, may appreciate the strength of the enthusiasm of the votaries of the sacred river. But it is when the eye passes over the site of Memphis that the Christian feels especially awed

and interested in the contemplation of the scene beheld from the summit of the monument of Cheops. It was here the Israelites suffered under the lash of their task-masters, until one of the haughty Pharoahs was urged to listen to the commands of the Almighty. From the prophecies of Ezekiel and of Jeremiah may be drawn an explanation of the changes that have occurred in the place before us. We see a silent waste where a proud city once stood, and instead of gorgeous palaces and crowded streets, nought is discernible but the abodes of beasts of prey. As the eye traverses the dismal space, a multitude of strange and conflicting thoughts rush upon the bewildered mind—"ideas of duration almost endless; of power inconceivable; of majesty supreme; of solitude most awful; of grandeur, of desolation, and of repose."

The view taken from the summit of the pyramid of Cheops, looking in a south-west direction, presents almost a ground plan of the pyramid called Cephrenes, which was entered by Belzoni in 1816, through a passage near the centre of the north side at the dark spot seen near the base. Attempts had been made to accomplish the same object at different ages, but success was left for the persevering Italian, who gives the following simple reason for the arrangement of his plans. "I observed that just under the centre of the face of the pyramid the accumulation of materials, which have fallen from the coating of it, was higher than the entrance could be expected to be, if compared with the height of the entrance into the first pyramid, measuring from the base. I could not conceive how the discovery of the entrance into the second pyramid could be conceived as a matter to be despised of, when no one had ever seen the spot where it must naturally be presumed to exist, if there were any entrance at all."

This enterprising character began on his own resources, amounting to £200, an undertaking that had baffled the endeavours of the leading men in Europe, and at the time a purse of £20,000 was talked of, to be raised at the different courts for this purpose. Belzoni set eighty Arabs to work at wages of sixpence a day, and after some weeks of anxiety he was in danger of being branded as a madman, which the Arabs began to call him; when he, at length, discovered some blocks of granite that cheered his hopes. So closely did he find the similarity between the construction of this pyramid and that of Cheops, that he corrected his first calculations as to the point of entry, and searched more to the east, from the circumstance of the passage in Cheops not leading to the centre of the chamber, but to the east angle of it. A corresponding point was taken by him, and he succeeded in discovering a granite entrance, 4 feet high and 3 feet 6 inches wide, which dipped towards the centre for more than 100 feet, at an angle of 26°. When the passage had been cleared of rubbish, he found it was stopped by a block of granite, an obstacle that threatened to terminate all his labours. The obstruction proved to be a portcullis, fifteen inches thick; he discovered a regular groove to receive it, and with great difficulty

was, in consequence of its being open a few inches at the bottom, enabled to rise it. Here the granite passage ceased. A horizontal passage, of the dimensions of the first, continued for 22 feet 7 inches, and there was a shaft, or well, 15 feet deep. Descending the latter by means of a rope, he found another passage, with the same angle of declension as that above, running in a contrary direction, or off from the centre. A passage ran from the bottom of the well also towards the centre. Belzoni did not hesitate to follow the passage, which proceeded in a centrical direction, and terminated in a chamber at the centre of the pyramid. On entering it his eye searched for the sarcophagus, but there was none. He afterwards found it sunk into the floor. It was of fine granite, eight feet in length, the lid broken, and rubbish inside. Some bones, said to be of a bull, were discovered mixed with the rubbish. This chamber, which is nearly of the same dimension as that in the pyramid of Cheops, is cut from the solid rock, as is part of the passage leading to it. It was obvious that the curious of another age had been there. Some inscriptions were found executed with charcoal; one in Arabic characters was translated thus: "The Master Mohammed Ahmed, lapicide, has opened them; and the Master Othman has attended this; and the King Alij Mohammed at first to the closing up." Our persevering traveller returned to the wall, and followed the opposite passage already mentioned. He found that at the distance of 48 feet it communicated with a horizontal passage, running also outwards for 57 feet. A side passage leads into a chamber deficient in any point of interest, save an inscription like that in the first. From the extremity of the horizontal passage, another runs inwards with a rise of 26 feet, until it terminates at the base of the pyramid, which thus appears to have had two entrances. In this last passage, as in the other, there is a groove for a portcullis. Nothing can be more mysterious than these structures; that vanity and despotism should raise such monuments we can imagine, but when we consider the granite passages, the portcullis, and the several chambers, the mind is lost in conjecture.

Various have been the opinions as to the uses of the Pyramids. In this enquiry one point is most remarkable. The entrance passages are found to descend with an angle so as to retain a sight of the polar, or north star. It appears but reasonable to conclude, that they were connected with the observance of some festival whose time would be fixed by the aspect of the stars: and it is equally probable that the sarcophagus was meant for some honoured deity (perhaps Apis) in connexion with the same ceremony. The antiquity of these piles is of equal uncertainty with their use. They have no hieroglyphics to be decyphered, so they are doomed to retain their original mysterious garb. These pyramids are said to have been coated from top to bottom, and covered with figures; about 40 feet of coating still remains on the one before us. That of Cheops has no appearance of having been touched in this way, and it is the opinion of Belzoni that this pyramid (Cephrenes) was never completed, as no signs of coating were found by him in removing the sand at the base. He explored around the base of the pyramid of Mycerinus, which lies beyond that of Cephrenes, and thinks it was cased with granite, in consequence of finding fragments of that material in the rubbish. This pyramid still remains to be opened by some enterprising traveller. Belzoni made an attempt, but failed. The monument of Mycerinus is only about

160 feet in height. Another may be seen beyond it of a still smaller dimensions. It is remarked of the last, that its summit is crowned by one large block of stone, as if for a pedestal. To increase the stability of these piles the stones are fixed to slope inwards, and so well were they adjusted that not one has swerved from its position. Nothing could form a foundation for supporting such a mass but the rock itself, and it may be seen by the view that a sufficient space was levelled, a part of the crest of the hill being escarp'd for the purpose.

The pyramids of Sakara are three miles south of Djizeh, and beyond them again are those of Dahchour. Many more of brick, or of stone, are scattered over the plain, intermixed with excavations, cemeteries, and fragments, extending over a space of several miles, and supposed to have been connected with Memphis. Fronting the river and opposite the pyramid of Cephrenes, the colossal sphinx reclines in ample majesty; it is hewn from the living rock, and bears many hieroglyphics and mysterious symbols, all of which still afford matter for conjecture. It is a proper companion for the piles beside it. Temples are supposed to have been in the vicinity, and the whole group probably formed a connected theatre of mysticism. The paintings and sculpture discovered in the rock-chambers and catacombs form some of the finest specimens of the arts in Egypt. The designs are so numerous as to include a view of every description of domestic and public occupation; some are beautifully finished by the aid of colours laid on figures in bas-relief, as at Thebes. Openings to such excavations may be seen in the Plate. Many of them afford most comfortable apartments, and it would be well for travellers to go prepared for a night's sojourn. It is fatiguing and unsatisfactory to hurry the visit to the pyramids; if one day only be devoted to it, undue expedition must be the result, as the gates of Cairo, and of all walled towns in Egypt, are shut at seven o'clock in the evening, and those who are without after that hour must find quarters in the suburbs.

While I was at Cairo I visited a public functionary in one of the large buildings, marked with red and white paint, that are so conspicuous from the streets. Nothing could be more agreeable than the sudden transition from a noisy crowded avenue, to the large airy and decorated court, exhibiting a good display of statuary, with fountains, delightfully refreshing to the eye. Instead of the prison-looking casements observable outside, there were large and handsome windows, which added elegance to a highly ornamented house. Walks were seen, winding amidst rich foliage and flowers, altogether rivalling a scene in the "Arabian Nights." A hall of noble dimensions led to apartments that had exhausted the efforts of Italian artists. Attendants showed by their respectful bearing the dignity of the inmate, whose easy style of reclining and of handling his pipe, bespoke his familiarity with such attention; he was distinguished by the same courtesy that is found throughout the higher ranks of Turks. His conversation was directed to foreign countries, with which he appeared but little acquainted. He has a nephew being educated in England, who, with greater advantages, will doubtless have more knowledge. The liberal policy of the Pacha has caused a number of gentlemen to be sent for instruction to different countries in Europe; and more recently the same





VILLAGES OF DEROOT & SINDIOUR,
on the Banks of the Nile

ON THE NILE.

beneficial system has been extended to hundreds of his youthful Arab subjects. What may not be expected when the science and enlarged policy of Western Europe return to direct the resources of such a country as Egypt? There are various and extensive bazaars that amuse the visitor in his idle hours. A traveller, lounging in the crowded streets, will often have to seek protection in some doorway, to escape a camel whose load sweeps the walls on either side. At another time he will be glad to avoid too close contact with the prancing charger of a well-mounted Bey, who from his bearing is evidently accustomed to enforce submission. If the stranger be mounted on a donkey he will gain but little in speed; his attendant will loudly proclaim his coming, but the buzz renders such offices useless. The dense mass resist all argument, and stand the shoves of the passer-by, whose knees are sadly punished unless he is patient and submissive.

Before leaving Cairo I was honored by an interview with the Pacha, at his palace at Shoubra. I was attended by the Austrian vice-consul, and overtook his Highness strolling in his garden. His walk was firm for a man of sixty: on perceiving us he invited us to proceed to his palace. It lies prettily among trees, that overhang a large tank, kept alive by fountains, and the whole relieved by a profuse exhibition of statuary. The modern invention of gas has been called in to complete the comforts of this charming retreat. We entered a large hall with a divan at the upper end. The attendants remained near the door, and the vice-consul and myself were alone invited forward, and to be seated. The Pacha asked many questions concerning my route, and the reception I had experienced from his officers, and expressed pleasure that my report was so satisfactory; he conversed about his troops, and seemed to know the Arab character well. An English hunter had just arrived, and I was called upon to describe a fox hunt. The incidents that attend such a scene I endeavoured to explain, and his Highness seemed much amused at the idea of dogs, horses, foxes, and men, jumping fences and falling foul of each other. I fear my account was imperfect, as it was made in French, and turned from that language into Arabic for the Pacha. The chase is not a French pursuit, and its many technicalities were difficult to express. The Pacha was kind and affable; I saw nothing in his government to contradict this impression; coffee was ordered, after which we took leave. His Highness had a pipe in his hand, but it appeared more to play with than for use.

I had met much attention from several English gentlemen at Cairo, some of whom were stationary. A party were preparing for a journey to Jerusalem; several were pursuing the study of Egyptian history, with a perseverance that may at some future day cause the world to have more than a mere dissertation on hieroglyphics.

On the 12th of February I left Cairo, and proceeded to Bulaq, where, by Osman's assistance, for four dollars, a boat was found on the instant to carry me down the river. The same evening a fair wind wafted me rapidly past the buildings that border the Nile in the vicinity of the capital. After losing sight of Cairo, there is little to attract the attention beyond numerous small villages, that show the approach to the populous Delta. A few miles below Cairo the aspect of Egypt completely changes,

ON THE NILE.

the mountains of the Libyan side take a westerly direction, while the high land on the opposite bank runs eastward. The Nile, hitherto confined to one stream for nearly 1350 nautical miles, from the mouth of the Tacazza, is found to benefit by the liberty thus given, and divides itself into several branches, which again subdivide into streams and canals, and thus render the country one vast garden. If the voyager is proceeding from Cairo, he will be at the apex of the triangle that includes the territory of the Delta, the base of which—the Mediterranean shore—has a length of 150 miles; the sides of the triangle are branches of the Nile, each 120 miles in length. From the account given of Egypt by Herodotus, it would appear that this part of the country was reclaimed from the sea by mud carried down by the stream. In the reign of the first king of Egypt no part of this territory was visible; its soil is at present about five feet deep. The black mud of the Nile extends itself for some leagues off shore, and is the mark of navigators on approaching the low coast of the Delta. Some of the ancient branches of the Nile are dried up, and much of the intermediate territory has a desert appearance, the consequence of misgovernment and neglect.

Our progress down the stream was checked by the north wind, which is the prevailing one. Recourse was had to the towing-line, but the boatmen gained very little by their exertions, principally owing to the neglected state of the bank. I was therefore obliged to submit to their custom, and wait for lulls of wind to enable us to benefit by the current and rowing together. A heap of rubbish, and some fragments on the right bank, show the site of Sais, the ancient capital of the Delta, where kings once had palaces and tombs. Lower, and on the opposite bank, is Ramānīeh; a canal formerly connected this place with Alexandria, but not being navigable when the Nile was low, it was transferred to a site lower down.

In 1801 the British troops drove the French from an entrenched camp near this place, the remains of which may still be traced. Fouah, which is further down the river, and on the right bank, has rather an imposing appearance from the minarets of ten mosques, that rise among a proportionate number of houses. This place is on the increase; there are manufactories, and the canal to Alexandria leaves the opposite bank of the Nile from the village of El Eft, a little below Fouah. Mud from the river has embanked the entrance to the canal, and renders it unnavigable for a few miles when the river is low. Baggage therefore requires to be transported to other boats, which causes such inconvenience and delay that most people prefer continuing the voyage to Rosetta, the method I pursued. El Eft is distant from Alexandria about 40 miles, in a direct line, but the canal extends over a line of $47\frac{1}{2}$ miles; it is 90 feet wide and 18 deep. It was made in 1819, and offers a striking illustration of Eastern rule. The government having determined on the measure, a quarter of a million of men were set at work, directed by some Franks, and the canal was rendered navigable the same year it was begun. This example of the resources of Egypt in her fallen state, will render the wonders of former days less matter of surprise. A short distance below Fouah are the villages of Deroot and Sindior.

VILLAGES OF DEROOT AND SINDIOUR.

THESE villages are situated on opposite banks of the Nile, and have the same general features which characterise the smaller towns in Egypt. Dark square houses of sun-burnt brick are mixed with the circled mosque and the pointed minaret, and these again are relieved by scanty or ample clusters of palm-trees, altogether making a pleasing group, when seen from a distance that conceals their poverty. These villages, like all others formed of similar materials, lose their importance on a near approach. There is a want of neatness in the habitations; and, unlike the snug English cottage, their crumbling walls seem but a continuance of the rubbish invariably heaped at their base. A few prison-like openings are sufficient to admit light enough for the lonely pursuits of the Arab fellah. The houses of the better class have one side concealed by a wall that encloses a court, which, with the seclusion observed by the females of the country, admits of exercise for the family. The windings of the river open on the perspective of more distant villages, or the tomb of a saint marked by a few palm-trees. Boats are always to be seen pursuing their course, some with the latteen sail spread to catch the north wind, and influenced by it to stem the running stream; others passively borne on the bosom of the waters, divested of all rigging that might catch the opposing breeze. The mariners are ever ready to find some pretence for a gossip with the villagers, and many pretexts of filial attachment and fond affection are used to obtain a pause. The Nile is not the route on which to journey with despatch, and no traveller without a good share of patience should volunteer it. This remark does not apply to overland communication with India, as in that case the journey would be by land between Alexandria, Cairo, and Suez. The appearance of the Delta alternates with the season. At one time it shews a carpet of the richest hue; at a later period it is a parched and dreary desert; or it may wear the aspect of an extended lake, having villages and palm-trees like islands on its surface. There is a short period when it deserves no better name than a morass. The soil, lodged by the inundation, requires a slight preparatory working when in a moist state. The seed thrown on the slimy surface sinks of itself: "For the land whither thou goest in to possess it, is not like the land of Egypt from whence ye came out; and where thou sowest thy seed, and waterest it with thy feet, as it were a garden of herbs." If the soil be permitted to dry, it then becomes hard and difficult to manage. Portions are kept irrigated throughout the year by raising water through mechanical means. The annual rise of the Nile appears at all ages to have been liable to irregularities. One year it remains so low as to threaten a famine; another, it rises beyond its usual height, and sweeps whole villages before it. Most towns stand higher than the country around, and look the more imposing, as the Plate will illustrate. Large fragments of strongly cemented brick-work are often detached from the bank of the river, causing much obstruction to the tracking of boats, which no doubt they were originally intended to facilitate. These remains make it evident that due weight was formerly attached to river navigation,

at present so disregarded, that from obstructions on the bank it often becomes totally impracticable. The sites of many ancient places in the Delta have altogether disappeared; and, although the Egyptians raised artificial mounds for their temples, &c., the annual deposit of mud from the rising waters has reduced all to the same level. When the eye of the traveller overtops the bank of the river, if it be the season when I voyaged, he will observe a rich mixture of the brightest tints developed by the abundant crops for which this land has ever been proverbial. All nature appears re-animated by the return of the season of Plenty, the temperature is delightful, and will be acknowledged as such by the wanderer, who sits on the deck of the vessel cooled by a breeze, and warmed by heat, that seem happily combined to make him feel doubly grateful. Supposing a fourth of the area of the Delta lost to cultivation from neglected canals, there will be about 6,000 square miles remaining. If to this be added 5,400 square miles for the valley of the Nile, allowing the latter an average breadth of nine miles, the cultivated portion of Egypt will be found to contain 220 persons to each square mile. Ireland at present subsists upwards of 280 on the same extent, in defiance of all her bogs and mountains. When further consideration is given to the Oases, that lie in the Lybian Desert, where large tracts of land are capable of cultivation, there can be but little doubt that Egypt, under proper regulations and husbanding of her resources, would be capable of maintaining seven and a half millions of inhabitants, which the country is said anciently to have contained.

A passage through the Delta has little novelty or interest; the prospect being confined by the banks of the river rising on either side, without any hills to vary the monotony. Village after village comes in sight, affording some pretty pictures as they are seen mixed up with the palm-trees, or surrounded with conical-formed pigeon-houses. Mussulman tombs rise occasionally over the bank, and awaken interest by their diversity of form. Numerous water-machines are at work on the margin of the river. The Persian wheel is the most effectual method, but the natives have a more common way of effecting their purpose by simply balancing a long pole on an upright post, having a weight attached to the end opposite the bucket. This machine a man works with ease, and raises water 8 or 10 feet at a time; two or three are often connected to get the water from the river to the top of the bank, whence rivulets are formed to irrigate the adjoining field.

After a tedious passage I arrived, on the night of the 15th, at Rosetta, situated on the right bank of the Nile, about four miles above its outlet into the Mediterranean Sea. A row of houses runs parallel to the shore, and an open space between them and the river performs the double office of harbour and a place of public resort. A highly cultivated country, with innumerable date-trees, wears an inviting appearance to him who reaches this city from the Desert, or Alexandrian side. He who approaches Rosetta by the Nile will find less to awaken his admiration. The dead level



may pursue this dreary path during the prevalence of the khamseen. On the opposite side of this sterile waste, the long-rolling surf bursts with deep sounding murmurs, and the path is rendered more firm by the waters of the Mediterranean that lave it bare. The pace of the mule kept the Arab attendants at an easy run, accomplishing about five miles the hour. We passed a village and a sheik's tomb, a little inland, where water was offered by Arabs, expectant of the traveller's liberality. As we advanced, the land was more interesting from having been the scene of contest between rival European nations. A ferry is to be crossed, and is made of consequence where delay is required to unload the animals. We now saw the Bay of Aboukir, with its ruined fort. An island beyond the peninsula bears the name of "Nelson." The nature of the hero's masterly operations are demonstrated by the semi-circle of rocks which enclosed his opponents, but which formed no protection against the skill and daring of the British seaman at "The Battle of the Nile."

The alluvial soil and sandy shore changed for a rocky coast and desert, now continued westward. Near Aboukir Bay a small *caffè*, or caravanserai, affords a resting place, and nearly divides the distance to Alexandria. I found it tenanted by a large concourse of travellers, who had crowded in to avoid a rainy night. The closeness of the place, and the buzz of various languages, with the interruption from those insects always abounding in such places in Egypt, rendered the night any thing but refreshing. At dawn of day I accelerated my departure. The spot was pointed out where Abercrombie landed his brave army, and there is a succession of sand hills and date-trees, where many trials of valour took place between his troops and the French. We occasionally passed the grave of a Moslem ally, and positions where a stand had been made, and where much English blood had dyed the sand, as did that of the brave Abercrombie, who fell near the remains of an ancient fort seen to the right of the road, a few miles from Alexandria. A few tombstones of our countrymen are left. On one the words "Lieutenant Colonel" are discernible, but it is saddening to find that the name is gone. Another to a Serjeant forms the lintel to a door at a neighbouring cottage. Such is the melancholy conclusion of the soldier's history when he falls on a foreign shore! Higher hills arise before reaching Alexandria, where traces of another position taken up by the retiring enemy are observable. Pompey's Pillar soon shews itself, and forms a noble approach to modern Alexandria. An outer wall is passed by the gate called Rosetta; a tomb of ruins then intervenes for a mile, when a second wall appears crossing the tongue of land that contains the present city. There is a hotel at Alexandria, and travellers may obtain information from their countrymen, for here are Europeans of all nations. English travellers have spoken of a hospitable reception similar to one I experienced from the firm of Briggs and Co., from whom the requisite coins to journey east or west may be procured for bills of exchange.

The delay at Alexandria will depend greatly on the plans of the party. Passages to one port or other to the westward offer daily; but if Malta, or any particular destination is an object, a sojourn of a couple of weeks may be requisite. If so, lodgings are to be had, and there is a bustle and interest attached to the place likely to keep off *ennui*, at least for the requisite period.

The position of Alexandria, surrounded by the ocean and a desert of sand, and flourishing in the vicinity of the most fertile country in the world, renders it a landmark in history at the rise of the Macedonian empire. Previous to this event we find the capital of Egypt situated inland at Memphis. The origin of the latter city was obscured by the progress of ages, even in the days of the earliest historians, and the date of Alexandria, the modern capital of this primitive nation, is coeval with the most ancient cities of Europe. But we find that another, and more ancient seat of government even than Memphis, existed at Thebes, equal in size to either of the others, and still more removed from the sea. The early history of Thebes is altogether conjectural; and is shrouded in the gloom of a period long antecedent to the existence of written records. To enter the mazes of Egyptian chronology from data handed down by the most ancient authors, is to plunge into an endless and obscure labyrinth. Herodotus tells us that a list of 330 sovereigns was in possession of the priests when he visited Egypt. They followed in succession from Menes, supposed the first mortal king, whose reign is said to have been more than four thousand years from the present time. The same author informs us, that when Thebes was the capital of the country, all that part of Egypt below Memphis, (the Delta), was covered by the sea. The formation of the Delta, which constitutes half of Egypt, caused the ancient capital, which had been in the middle of the country, to be removed to Memphis; and, at an after period, the rise of nations in the west brought Egypt in contact with maritime countries. The seat of government was then removed to the coast. So materially have these revolutions altered the ancient character of Egypt, that we would be inclined to doubt its early history were it not that testimonials, such as are seen in the illustrations of this work, remain, as it were, living witnesses of what has been recorded. The traveller will observe in various places a representation of such arts and mysteries as quite respond to the records of those days "when terrible things were done."

Alexandria is the sea port and key to modern Egypt, whose low and sandy coast does not offer another haven. The mouths of the Nile, from causes already enumerated, often preclude the entrance of vessels. Alexandria owed its importance solely to commerce, whose multiplying resources rapidly converted an area of fifteen miles of the Lybian desert into a city of palaces. It has nothing remaining of its ancient splendour beyond scattered ruins, which shew its wonderful extent. Like a poor neglected orphan, it now presents only the name of former greatness; but it must ever retain the means of regeneration, and would rapidly be revived if cherished by some active maritime power. The ages when traffic was restricted to caravans, when camels laded with spicery and myrrh were seen going down into Egypt, was followed by the epoch of navigation, and the "ship of the ocean" supplanted the "ship of the desert." The cloud which long enveloped the land is vanishing before the beams of science; the minds of its inhabitants are recovering from the spell of ignorance that for a time ruled the destinies of this eventful country.

Among the principal objects of attraction in the vicinity is Pompey's Pillar.

of the adjoining fields has a swamp-like appearance, and the eye wanders in vain in search of an object to repose upon. The long line of houses which fronts the river has a cross communication with narrow streets, and gloomy habitations of two or three stories, all built of mud, and containing about 20,000 inhabitants. They have no picturesque character or beauty to recommend them; and, if I may judge from those I became acquainted with, they are overrun with vermin. The traveller had better keep possession of his boat until he may find it convenient to depart. It may be interesting to visit an establishment that strongly stamps the Pacha's high opinion of British mechanics. By his direction, materials, to the very brick, were brought from England, to construct an extensive store and quays, with cranes and various machinery for useful purposes, exactly after an English model. A steam-engine forms part of the machinery. The work was ably performed by Mr. Galloway, a civil engineer, whose skill has given him a complete ascendancy in his profession throughout Egypt. Some Englishmen were here superintending this and other establishments. His Highness the Pacha is said to have carried respect for our national customs so far, as to order rations of rum to his men, to make them fight. The *pillau*, or boiled rice, is no longer the only dish; the Arabs are fattened with substantial portions of beef. A barrack, a cotton manufactory, and some mosques, constitute the other objects of interest at Rosetta. Mixed with the common materials, and forming parts of gates, there are many curious fragments and remains of antiquity. Here, as in other towns, there is no doubt much that will ever be concealed from the eye of the stranger. The trilingual stone, one of the most valuable relics in the British Museum, was discovered at this place.

There is no difficulty in procuring camels, or mules, or asses, to proceed to Alexandria. The journey, by great exertion, may be performed in one day, but it requires arrangement, and more punctuality than is found in the native character, to make it certain. Much trouble and disappointment are obviated by devoting two days to its prosecution. Before I leave the banks of the Nile, I may be permitted to make a few remarks on this famed river. For larger vessels its navigation must ever be precarious and dangerous. Northerly gales, acting against the current, cause banks suddenly to accumulate at its mouth, and sometimes totally to intercept the passage. These banks are removed by each succeeding flood, at which time the strong current renders the Nile equally difficult of egress. The Damietta branch is said to offer a better channel. From the sinuosities of the stream, and the shoals to be encountered after passing Rosetta, the Nile is not likely ever to become a channel for general communication, even for small steamers. The port of Alexandria is at present always resorted to, and from thence the journey towards Cairo is made by the canal, already named, or by Rosetta. Established in a boat on the waters of the Nile, further proceeding becomes most uncertain. If the wind be unfavourable, tracking, which consists of the boats' crew hauling a rope on the bank, and the *reis*, or captain, managing the helm, is resorted to; and in this process, even if a calm prevail, there will be many delays, and the voyage must be tedious. Northerly winds prevail in this country, and then the passage may be made against the stream. The current always coming from the

south runs at a slower rate when the waters have attained their height, and stronger when they are lowest. It will also depend in its force on the breadth of the river, and will be found running at two or at four miles an hour. The waters of the Nile begin to rise in June, or when the sun is north of the equator. The river attains its full height in September, and is again at its lowest in April and May. The regularity and causes of these changes have given rise to numerous conjectures. There can be little doubt of their depending, as do the monsoons in the east, on the action of the atmosphere in hilly districts. The mountains of Abyssinia, where the Nile finds its source, is south of the equator, and has a vertical sun during the Egyptian winter. The air on the mountains becoming rarified from heat, causes vapours to rush in from the surrounding ocean; these accumulate till the sun retires towards the north, leaving the collected element to dissolve, and fall in torrents over the adjoining mountains, washing down the red soil of Ethiopia to enrich the more favoured land of Egypt. The periodical changes are so decidedly marked in India, that the approaching rainy season is determined almost to a day. The phenomenon alluded to is well described in the following lines:

"Where'er the lion sheds his fires around,
And Cancer burns Syene's parching ground,
Then at the prayer of nations comes the Nile,
And kindly tempers up the moulding soil;
Nor from the plains the covering god retreats,
Till the rude fervour of the skies abates."

Northerly winds, although they prevail eight months in the year, are always liable to variations, as are southerly winds which blow chiefly in spring and autumn. The causes enumerated render the navigation of the Nile at all times a matter of doubt as to duration. The voyage from Alexandria or Rosetta to Cairo, or contrarywise, may be one of three weeks or three days. It has been recently mentioned in the London journals, that a stage coach had been shipped for Egypt, to run between Alexandria and Cairo. With such a conveyance the ninety miles that separate the two places will be accomplished with very little inconvenience or delay. If this arrangement be not immediately matured, it would, no doubt, speedily follow an establishment of steam-vessels between England and India. The Desert of Suez presents no kind of obstacle to the same convenience being extended, so as to connect Cairo with the Red Sea. But, independent of such projected improvements, there exists no difficulty at present in pursuing this route by horses or camels, and the delays that attend the navigation of the Nile need not influence the transmission of despatches.

On the evening of the 17th February, I left Rosetta on a fine mule. My baggage and supplies were reduced to two camels' loads, and less than three dollars covered the whole expense of carriage to Alexandria. The gate of the town, issuing from badly built walls, ushers the traveller immediately on high hills of sand, overgrown with palm-trees. Clearing this forest, the Mediterranean is seen in front, divided by a wide belt of sand, having posts at regular distances, as a guide to him who



Drawn on Stone by A.J. from a sketch by Capt. W. Head

POMPEY'S PILLAR WITH PART OF ALEXANDRIA,

taken from the N.E.

POMPEY'S PILLAR.

THE most interesting object to a foreigner is the majestic column known by the name of Pompey's Pillar, and standing on an eminence half a mile south-west of the gate that leads to Rosetta. Like most of the Egyptian monuments, its early history is lost in the remoteness of ages. Alexander, Cæsar, Adrian, and others, have been severally named as its projector. It acquired its present designation on the revival of learning, after the long night of barbarism that followed the subversion of the Roman Empire. At that era travellers bestowed names on many of the ruins and monuments of Egypt, which names they retain to the present day, no one having, been able to dispute their title. It was known that a monument to Pompey had been erected at Alexandria, and this column was readily called after this popular, brave, but unfortunate, soldier. The honours of nomination have recently been restored to their legitimate owner, in consequence of the inscription, "Diocletianus Augustus," having been decyphered on the work. If perfection in art consist in affording continued pleasure, its achievements, when contemplating this column, must be deemed unsurpassable. A Corinthian capital of ten feet is poised on a shaft of $67\frac{1}{2}$ feet, the latter resting on a base of $21\frac{1}{2}$ feet. The whole rises to a height of nearly 100 feet. Its loneliness gives the column additional interest, and the eye expatiates on it with elevated delight. There is a richness conveyed to the plinth by an apparent swell, caused by the diameter suddenly diminishing from the centre. The same style is introduced in the columns in front of St. Martin's Church, in London, but there the effect is lessened to the sight for want of a sufficient elevation. The diameter of the column at its base is about nine feet, it diminishes two inches at the centre, from thence to the summit it diminishes eighteen inches. The pedestal, formed of stone loosely put together, appears quite unequal to sustain the enormous superstructure. Here there has been another discovery that adds fresh material for speculation. The column rests on a fragment of about five feet of a granite obelisk, having its hieroglyphics inverted, and this is based firmly on the solid bed of the hill. A degree of national interest has been imparted to this monument by the enterprise of some British seamen, who having passed a cord over the capital by means of a kite, raised a rope likewise, and then a sailor. A set of shrouds was eventually affixed, and a jolly party mustered in the crown of the capital, a space eleven feet square, on which were evident remains of a font supposed to have belonged to a statue. When the eye looks beyond the scene of the honest tars' frolic, it ranges over the spot where Nelson fought, and where Abercrombie fell, and where many a gallant effort was made by their brave followers. The shaft is of a single piece of granite; its capital, probably of another age, is of sandstone, and the base, formed of pieces of stone, is of a recent date. The shaft evidently leans from a perpendicular, and is a little shivered on the side towards the east.

The change now in progress in the government of Egypt, and its spreading influence towards the

north, points out a more appropriate situation than the present for the seat of government. The nature of the Pacha's resources, and the disposition of his subjects, is such, that the certainty of hereditary territorial possessions would reconcile him to surrender a country like Egypt, which is from its position and nature strictly commercial. Certainly there is a wider field for Mohamed Ali, and he would be a most useful power to Europe if occupied in the reduction of Central Asia, to prepare that territory as he has done Egypt for the seeds of civilization. The formation of a regular government in these hitherto lawless regions would cast a different shade on the probable destinies of the world; and if a close alliance were simultaneously formed with Egypt, there would always be the means of moving a force that must check, if it did not overthrow, the growing power of Russia in her progress to the East. The dependant state of Egyptian commerce in the Red Sea, added to the trade evident from the numbers of British merchantmen at all times awaiting cargoes of cotton in the port of Alexandria, is enough to shew that England is the European nation to receive and contribute benefit from an alliance with Egypt. Such ideas must occur to the traveller who crosses the Isthmus of Suez, and so rapidly passes from the shores of the Eastern to those of the Western Ocean. Amidst the march of events that threatens another era in the eventful history of the globe, Egypt, heretofore the instrument of revolutions, is again likely to become conspicuous in influencing the fate of nations.

It is said the French contemplated inscribing on Pompey's Pillar the names of their officers who fell in the vicinity. Such a distinction might be fittingly bestowed on the heroes of Britain. The Battle of the Nile was fought within fifteen miles of this spot, and the intermediate space is equally memorable for the glorious deeds of a British army thus referred to by Dr. Edward Clarke: "It is subject of wonder that our troops should have succeeded in this instance as well as they did. They landed under every possible circumstance of disadvantage, and yet drove from their posts, with the bayonet, the veteran legions of Bonaparte's army; a mode of fighting in which the French were supposed at the time to be superior to every other nation. It was then manifest, as it has been so decidedly proved, that, man to man, they have no chance of success when opposed to British soldiers. The laurels acquired by our army in Egypt can never fade. Posterity will relate the heroism which, on those remote and almost unknown deserts, enabled an inexperienced army to vanquish an enemy, not only in possession of the territory, but also inured to the climate, and well acquainted with the country."

In viewing the column as it appears in the Plate, the distance is lost in wide expanse of the Mediterranean, over which the eye loves to wander. The pharillon (a light-house) is seen at the extremity of a causeway that connects it with the main land, while at the same time it forms a protection from the western gales. Midway is seen a part of the town and the square building called the

okellah, where the flags of different nations point out the residences of various consuls. The western port, or the "harbour of the faithful," is not seen in this view. It touches one side of the city, and is now the resort of all nations. Foreigners, until recently, were confined to the haven before us, called "the harbour of the infidels," rendered foul from numerous ruins that extend over all parts of it. Among them are remains of the great Pharos built 264 years B. C., and considered one of the seven wonders of the world, said to have sent forth a flame like a volcano, to direct the approaching mariner. The present town of Alexandria, with 20,000 inhabitants, is confined to a tongue of land by a wall that crosses between the harbours. Beyond the town, within another wall, an extent for a mile is covered with remains and tumuli, and contains a few scattered houses and gardens; the whole space represents one great tomb, with here and there a column or fragment, rising as if to denote the nature of the hidden deposits. The outer wall or battlement is shewn in the Plate, and forms a semi-circle with its extremities resting on the eastern and western harbours. It is of Arab construction, framed of fragments of other buildings, and displays the character of eastern fortresses. It offers a sufficient protection against escalade, but is commanded by circumjacent hills, among which lies that eminence from whence the accompanying view is taken. The Rosetta gate forms a marked feature among the towers that at intervals break the uniformity of the wall. A distant obelisk, in the direction of the gate, is that called Cleopatra's Needle, and forms the subject of the next illustration. A fort, seen to the right of the column, formed part of the French defences, and the buildings about it still bear the name of French Town. All around Pompey's Pillar lie heaps of rubbish; the locality of this monument excites fresh conjecture concerning its ancient history. Enough remains in the vicinity to confirm all that has been said of the extent and glory of the capital of the Ptolemies. Wherever an excavation is made for limestone, a pillar or a rich entablature is discovered, or some painted apartment is entered. The mounds of earth have a great mixture of pottery, the same as in Upper Egypt, and from the total disappearance of private habitations where so many thousands are known to have existed, we may conclude that houses were chiefly built of such perishable materials. Besides the great space already stated, as indicative of the ancient glory of the city, the eastern harbour contains extensive ruins, and blocks of granite, pillars of porphyry, with other fragments of vast magnitude. They shew what must have been the splendour of the buildings in the quarter called Bactrion, where the royal palaces stood. Two or three fathoms of water now cover these ruins, and exclude them from research as completely as the same quantity of sand does those above the water mark. Apartments with colours on the walls, and other vestiges of these parts, have casually come to light, but no extensive excavations have been made in this mine of unparalleled architectural wealth.

The magnitude of Alexandria, so late as the sixth century, is attested by the following announcement of the Lieutenant of Caliph Omar. "I have taken the city of the west, it is of an immense extent, I cannot describe to you how many wonders it contains. There are 4000 palaces, 4000 baths, 12,000 dealers in fresh oil, 4000 Jews who pay tribute, 400 theatres or places of amusement," &c. But

the most melancholy part of the announcement is, that the library supplied all the baths of the city with books for fires for six months. The ancient city, which had a boundary of fifteen miles, is said by Pliny to have contained 300,000 citizens, with as many slaves. The present wall, that encloses a mile of rubbish, with the modern city within, extends over a space of five miles. Modern Alexandria has no recommendation in itself; its houses of three or four stories possess no beauty, the best are those occupied by Franks, of whom there are about two hundred who live perfectly unconstrained by Moslem prejudices. The bazaars are without architectural style or regularity; they, however, are stocked with a good supply of several necessaries. The commerce in the western harbour is the life and main stay of the place. A handsome palace of Ibrahim Pacha's, recently completed, ornaments one side of the busy harbour. An extensive dock yard, where, since my visit, three line-of-battle ships have been built and launched, also looks respectable. There are other public buildings well situated for business. Many fine English ships were waiting for a freight of cotton. If the industry of Egypt were fostered, and its endeavours chiefly fixed upon improvements in agriculture, she would undersell the world in the essential articles of life. It is in vain that efforts are made to establish manufactories with steam machinery where no fuel exists, or to expect prosperity to arise from them when the growth of the materials is neglected. The efforts making to improve Egypt, while they shew the laudable disposition and enterprise of the government, bespeak an erroneous system, made more conspicuous by the destructive effects of monopoly.

I was favored with an interview by Ibrahim Pacha, son and heir presumptive to the ruler of Egypt. His figure, large and muscular, is quite dissimilar to that of his father; like him, however, he exhibits energy, and a bold, stirring spirit, qualities which have been matured by military service, and by his intercourse with Europeans, when in command of a force in the Morea. Although comparatively young, he stands high as an officer, and is, by his present exertions in the field, sustaining the favorable opinion that had been formed of him. His manner is courteous and frank, but he is evidently better suited for the war-horse than for the audience chamber. He has many years of existence to hope for, that may cause his name to be hereafter more distinguished in the political records of our times. Except in outward show he is virtually sovereign of Egypt, and pursues the same liberal policy that has so rapidly advanced the country. The son of Mohammed Ali is now pursuing a successful career in Syria, and promises to fulfil all that has been predicted of his improving system in the preceding pages of this Journal. His demi-disciplined legions have proved themselves far superior to the untaught natives of Central Asia, and the army of Egypt threatens an overthrow to the Ottoman dynasty. Such will probably be the issue of the present struggle, if the European tactics stand neutral, and if the Turkish Empire is not strengthened and directed by the Court of St. Petersburg. The tranquillity of Europe will be better secured, if the proposed measure of raising Egypt and Syria into an independent nation be supported by civilized states.

The next object of interest to the traveller in the vicinity is





PILOSPAPRAS - NEW YORK with Part of ALEXANDRIA.

taken from the North

Printed by C. Bullock and Co.

CLEOPATRA'S NEEDLE.

NEAR the Eastern harbour are a pair of stately obelisks which, like Pompey's Pillar, bear a popular name without any legitimate claim to it. Two obelisks are known to have been transported from Upper Egypt to decorate the palace of the Ptolemies, and may have been those depicted in the Plate. One lies prostrate and half buried in the sand, while its neighbour continues pointing proudly to the sky. Each is formed of a solid piece of red granite, brought from the further extremity of Egypt. Deeply wrought hieroglyphics ornament the sides, and are fine specimens of the sculptor's art. The height of the prostrate obelisk, including the apex, is 67 feet, the breadth of its base is 7 feet $\frac{1}{4}$ inch, by $7\frac{1}{2}$ feet. The pedestal is 7 feet in height and 9 feet square. The action of the south-east wind, with the particles of sand it drifts from the Desert, has almost obliterated the hieroglyphics on the side exposed to its influence, while the sides that face the more frequent and boisterous gales from the north and west, retain their original integrity. The application of the sledge hammer to obtain specimens from the base of the obelisk has rounded it, and exposed clamps, called "dogs," that were introduced to assist in maintaining its upright position. Four square indentations in the base of the prostrate one, shew that such was the method originally adopted for securing its stability. A Turkish guard-house, at the junction of the wall and sea shore, is the only building that now exists near the spot. Excavations in rocks, lining the coast, and other indications, evince that these lonely monuments once rose amidst a busy multitude. All around are pits opening to deep chasms and painted chambers, now the undisputed abode of the jackall. These excavations render the ground difficult to ride over, and give the whole neighbourhood the appearance of a great necropolis. The standing columns distinguishable near the centre of the Plate, are said to mark the site of the library, or the temple of Serapis, whose spacious chambers were adorned with statues of exquisite workmanship in honour of their favourite idol. Few are the remains now observable of a city once "the queen of the east." Its ancient extent, like that of Thebes, is fully marked by scattered and eloquent witnesses, denoting power and riches. Among the few objects of interest that are observable throughout this subterraneous city are aqueducts of immense magnitude for conducting the waters of the Nile. All that is seen of Ancient Alexandria is as a monument of its past glory, and accords fully with the exalted character of her founder, with the grandeur of her Roman masters, and the voluptuous career of the Ptolemies.

On the shore to the eastward of these obelisks are excavations and baths; and similar works are found on the opposite side of the city. In adjoining cemeteries are seen Roman, Grecian, and Egyptian remains. The few relics discernible in this field of desolation offer but an unsatisfactory record of a city, rendered from associations equally interesting to the antiquary, the Christian, and the philosopher. The upright obelisk seen in the Plate is destined to ornament the French capital, like the twelve that were transported from Egypt to Rome by the Cæsars for similar purposes. It might, ere now, have been

added to the many beautiful works of art that embellish London, as will be evident from the following notification of His Highness the Pacha of Egypt to the Prince Regent of England,—“as a mark of gratitude and esteem for favours received.” The Pacha stated—“That his intention of making a present of some fine pieces of antiquity to His Majesty had been known to the world, and had appeared in many of the public papers; that, in consequence, he wished the gift should be one of the greatest possible value in general estimation; that he regretted the mutilated state of the Alexandrian obelisk, and offered in its stead one of the finest of Upper Egypt, or any other piece of antiquity in his territories which could be deemed a present more worthy of His Majesty’s acceptance; adding, in conclusion, that should the Alexandrian one, nevertheless, be the one ultimately selected, he begged it to be fully understood that it was his wish to defray every expense attending its removal, until it was placed close to the very stern of the vessel appointed to convey it to England.” Twelve years have elapsed since this notification was made, and the needle of Cleopatra remains in its neglected state. There seems to be a disregard of courtesy as well as of policy, in not accepting this offer of a grateful prince. The French, more alive to their interest, have selected the upright obelisk, of course the most perfect, and the two that form the approach to the temple at Luxor, represented in the vignette to this work, and with the approbation of the Pacha, operations for their removal are now in progress.

It remains for the British government to obtain the Carnac obelisk already adverted to. It is one of the most interesting and beautiful specimens of art that Egypt offers; but unless steps are taken to secure it, other European nations may be expected to possess themselves of so desirable an object. Cleopatra’s Needle is connected with England not only as a gift from the Pacha, but as associated with one of the most brilliant exploits of the British army, and as its situation would render its removal a source of little expense, the transfer is well deserving of consideration. This subject has recently been discussed in the House of Commons, and it appears a final arrangement was opposed, from the idea that the act of robbing Egypt of its architectural memorials would be sacrilege; but this argument will not avail against the fact that other nations are aggrandising and embellishing their capitals with similar ornaments to those so liberally bestowed on this country. And it will be seen in the progress of this Journal, that the withdrawal of valuable specimens of art from Egypt is the only mode of preserving them from the assaults of barbarian violence. The base of the obelisk under consideration has recently been broken up to form building materials.

Another motive to the accomplishment of the removal of this obelisk will be admitted, when it is known that the British forces who possessed themselves of Alexandria in 1801, subscribed £7000 to effect the object. No doubt was entertained of its easy accomplishment, but it was relinquished, perhaps, from an idea similar to that expressed in the House of Commons. The above contribution was

returned, but the patriotic feeling displayed by the army and navy must ever be acknowledged. The French are now removing the upright obelisk, which is thus described by an eminent writer of that nation; "The column of the French, to be conveyed to France, to become a characteristic trophy of conquest." The British navy and army are surely entitled to a similar token of respect from their countrymen, when it is recollect that in 1801, Alexandria, after a series of brilliant actions, was surrendered to them; the French numbering at the time upwards of 9,000 men, and having more than 300 pieces of cannon, whilst three times this force were compelled to abandon their conquests in Egypt, and thereby resign all hope of further progress towards the east.

From data furnished by a British officer,* who ascertained every particular regarding this obelisk and its locality, I have been enabled to state its exact dimensions. It is of granite, the specific gravity of which was found to be 2.67, and the weight of a cubic foot square 166.875 lbs. avoirdupois. Allowing for fragments knocked off, the single shaft will be found to weigh about 180 tons. One half of this may be added as equivalent to the additional size of the obelisk mentioned at Carnac above that of Cleopatra. The weight of the former, therefore, cannot be less than 270 tons, or equal to five regiments of soldiers of eight hundred men each. To raise such a mass, an idea will be conveyed to those who have seen a similar operation in shipping the main-mast of a first-rate man of war. It would take ten such masts, with all their iron work, to form the weight of one obelisk like that at Carnac. The removal of this magnificent piece of art would be a triumph worthy of the present age of scientific enterprise, and with the obelisk of Cleopatra it could, without doubt, be brought to England for the sum of £15,000, proposed to be appropriated by Parliament to the purpose of transporting the Alexandrian one singly. From observations I was able to make in regard to their situation, and in conformity with the opinion of qualified persons, I feel confident in making this assertion, and the mode best suited for accomplishing the object appears to be to case each obelisk in the vessel intended to convey them to England, on the spots where they now are, and launch them on slides in the usual way, one hundred feet or more at a time, until a steamer can take the vessels and cargoes in charge, and at a favourable season make the voyage down the Mediterranean. Lowering the obelisk at Carnac, and all minor considerations would disappear before the skill of an experienced civil engineer. There is no section of the ground to be obtained by which an exact estimate can be formed for removing the Carnac obelisk, but its elevation above the river from which it is situated; a moderate distance would ensure the accomplishment of the task. Nothing can mark more strongly the persevering labour of the Egyptians, than the doubts and difficulties conspicuous in the present age of scientific improvement, of taking down and transporting these extraordinary monuments that were quarried, removed, and erected by the Pharaohs. A spirit of emulation seems to have existed amongst the Cæsars to take these masses to Rome, where some larger than any that have come under notice in this Journal are to

* Captain J. N. Boswell, R. N. is in possession of plans and data to effect the immediate removal of the obelisk.

be seen. The highest is called the Lateran obelisk, standing before the church of that name, the shaft of which measures upwards of a hundred feet; it was removed from Heliopolis to Alexandria by the Emperor Constantine, and was transported thence to Rome by Constantius, who was anxious to surpass the acts of his predecessors.

It would be negligent in any traveller to pass through Egypt without making a remark upon the plague, a name so discordant to European ears. This scourge, which was formerly so destructive, has of late years almost disappeared. The present government of the country we are treating of, has in this instance shewn another happy conviction and triumph over prejudice and the false doctrines of their prophet. The law of destiny, that Mohamedans so long and so obstinately adhered to, and which caused the clothes of the dead, laden with infection, to be distributed for the destruction of the living, has given way with other equally injurious doctrines, to the suggestions of practical expediency. Quarantine regulations are now enforced. The following opinion of French writers, when their forces occupied the country, will probably be found to be correct. "There is no doubt, if we were masters of Egypt, we might entirely remove, in a few years, a great part of the evils which infect and devastate it, such as the plague." It is also remarked, "the abilities of medical men have discovered medicines which check the fatality, if they cannot always secure a certain cure." After the European forces evacuated Egypt, the plague was not known in the country for ten years, or until 1813, and for the last eight years it has also been a stranger to the land. When this pestilence does visit the country, it is brought during the prevalence of the khamsin, or south-east wind, and lasts from the beginning of March to the same part of May. The air for that time blows like the hot winds in India, as if from a furnace, and arrives laden with particles of sand from the Desert. It is dreaded as destructive to the animal and vegetable world, and continues its ravages until succeeded by the Etesian, or north wind, which is joyfully hailed in May as the harbinger of health and happiness to the land. Should the plague appear in Egypt during the time of travellers being there, such precautions are known to Europeans who reside in the country, as almost effectually exclude it. It may also be avoided by a journey to Upper Egypt, where it has never been known to extend. The opinion we have quoted from the authority of French writers is borne out by that of the author of the Expedition to Egypt, who says, "Egypt, in the possession of a power who felt interested in her prosperity, might in the course of years calculate on the disorder being altogether annihilated, or its pernicious influence so corrected as no longer to possess the same calamitous properties."

At Alexandria I again had the pleasure to meet some of the travellers already mentioned, as proceeding from India; the destination of the party was westward. We mustered six who were anxious to proceed to Malta. A ship had nearly completed a lading of beans; we passed a few days on board amidst a busy scene that enlivened the harbour. Numerous vessels were in the bay, where each nation has its place of anchorage. Many English merchant-ships were awaiting cargoes of cotton, for which there was a demand beyond the immediate capabilities of the market to supply. One





VIEW OF MALTA FROM THE LAZARETTO.

From a drawing made at the time



MALTA, FROM THE QUARANTINE.

It was the 2nd of April before we reached the harbour of Malta, the approach to which is masked by battlements that surmount each other, and command the entrance so as to hail and welcome a friend from the rampart, or to cause destruction to an enemy. Our destination was the quarantine harbour. Numerous boats approached to render assistance, and tow the vessel if required. They are gaily painted and fancifully formed, with boatmen in a neat costume standing up, and pushing the oar forward, having the appearance of people walking, as they kept beside the ship. We skirted the fortress of Valetta and the town of Malta close on the left, while Fort Manuel stood on our right. The quarantine harbour beyond it is never free from shipping, and there are daily changes that in some measure take off the sad monotony of the twenty-five days' confinement which awaits those who arrive from Egypt.

The quarantine establishment is formed of several houses, situate close to Fort Manuel. Passengers are there provided with apartments, and every convenience that their situation will admit of, with a most regular establishment of officers and servants anxious to lessen the irksomeness and tedium of this temporary but strict imprisonment. The apartments are commodious and airy, which advantage, from the total want of space for exercise, is a blessing doubly felt. A boat will be furnished at a small expense per day, and it will be found a constant source of amusement, particularly as no objection is made to proceeding into the harbours beyond Valetta. A passenger, if unfortunately there should be but one, is placed under charge of a *guardian*; these are respectable and civil men, who become security for the observance of the quarantine regulations, and never lose sight of their charge. A fixed price is attached to this attendant, who equally takes charge of as many persons as may be in one party, and occupying the same range of apartments. Servants may be procured who will put themselves in quarantine for the purpose. A *spenditore* attends each day with a slate, on which all wants are put down, and are brought from an abundant market at regular prices; he also receives a daily allowance for his services, and produces bills for payment. Nothing can be more regular than the whole arrangement; although there may be an occasional feeling of impatience at the long confinement, and some disagreeable sensation when at sun-set the door is heard to grate on the hinges to exclude further egress. All communication with the world must cease until the welcome god of day again summons the officer to his duty. Nor is it pleasant to see the departure of the functionary across the water, knowing that he carries the instrument of release.

For some hours during mid-day friends are admitted to hold intercourse in the *Parlatorio*, an apartment appropriated for the purpose. The parties are separated by a double barrier, at a distance of sixteen or eighteen feet. The whole establishment is under a captain of Lazaretto, whose daily attendance insures regularity and attention to all necessary wants and indulgences. If there are two

persons, the expenses of the establishment will be about ten shillings a day to each; if more, it will diminish in a trifling degree with numbers. One person will require much the same expenses as for two. If the expense is found inconvenient, persons may undergo the quarantine on board their vessels, and have the same exercise in rowing and landing at the spot appropriated for that purpose. It is the open space seen in the Plate at the quay directly opposite; the high battlements that enclose it afford a perfect security for the safety of the parties. At the back of this space the ramparts are seen half formed from the live rock, and completed with firm masonry. The same mass of rock extends throughout the island, offering but few spots that can be cultivated, and not sufficient even to produce the necessary supply of vegetables, which are brought from Sicily, while cattle and grain are in the same way furnished from Barbary, Egypt, and other parts of Africa. The same description of grey stone that forms the battlements is also used for the houses of the town, which are massive, and of solid structure. Palaces and churches that have much to admire, with monuments which have been the work of past centuries, fill the space occupied by the walls of Valetta, and afford interesting annals of the history of modern Meleta.

The distant houses seen in the picture to the right of the fortification, is Citta Vecchia, situated near the centre of the island, and commanding a fine view. It was the ancient capital. A fine cathedral and religious establishments are confusedly mixed with battlements and outworks suitable to the religio-military order of the knights. The inhabitants of this island amount to 100,000. The men have a degree of supineness peculiar to countries within a certain latitude, and more evident towards the distant lands noticed in this Journal. A continual ringing of chapel bells is heard from the quarantine ground. Priests have a great ascendancy over the people, and more men are found in the chapels here than perhaps in any country under the sway of Rome.

The fortress of Valetta, now the principal place and seat of government, is built on a ridge of rock that divides the harbours. Steps are often necessary to ascend the crest of the hill, where stand the palace and principal buildings. The road passes from the town and across the parade to Florina. Further on, the country has the appearance of a wild and dreary space, with patches of cultivation and scattered churches pointing out villages; but here there is no generous Nile to enrich the soil. Heavy rains destroy the best efforts of man to remedy the meagreness of Nature, and the country is bare and unsightly. Valetta looks beautifully down on numerous quays and shipping, with about two thousand boats kept in constant work; and those again made more cheerful in their aspect by the awnings and gay colours suited to the warmth and fineness of the climate. There is a coolness in the sight of the blue water, and a cheerfulness in the fine view of the battlements and houses from its surface, that would render boating a constant amusement to the inmates of the Lazaretto, were it not for the pro-

jeeting land that requires to be rounded before the public harbour can be gained from that of the quarantine. Boating is, however, desirable on account of exercise, where there is a very limited walk, and it serves to amuse and reconcile the confinement, which is thus so materially lessened in tediousness.

Much attention is shewn to travellers by the residents at Malta, and the hospitality of the public bodies there is most conspicuous, their style of living being liberal in the extreme. Balls and entertainments followed in succession through the time I remained in the island, beginning the day we were released (23rd April, 1830) with a fête in honour of His late Majesty, George the Fourth.

A traveller may find amusement for some days at Malta, and he will see many objects of interest connected with the ancient history of this island. The knights claim the first attention, and the magnificent church of St. John's contains monuments and works of art, indicating the presiding genius of men of princely state. The floor of the church is composed of numerous slabs, containing as many specimens of coloured mosaic, each having the arms and motto of some departed Templar. In the pride of chivalry the forts and battlements of Malta were built by knights, and the fort of Manuel contains a fine bronze statue of the grand master of that name, arrayed in the robes of his Order. In the college and in the Palace at Valetta there are some pictures worth seeing, and the latter contains an armoury, with curious specimens of ancient work. A few miles from the town the governor's residence of St. Antonio offers a delightful retreat amidst some ten acres of foliage and cultivated ground, and it points out how industry can improve the most barren countries. This little paradise, amidst surrounding rocks, is, however, a deserted spot. It is thought to be unhealthy, and if we may judge from the prejudice of the Maltese to any thing like plantations, it must be so. With some difficulty a large enclosure of mulberry trees has been established in the island. It will be viewed with interest with the millions of silk-worms in different stages to be seen in an adjoining establishment. The patches of cultivation strewed over the island form a small proportion of the extended surface of rock that surrounds them. Numerous cross walls protect the gardens, to prevent

them from disappearing before the torrents of rain by which they are periodically visited. It has been said that the soil of the island was brought from Sicily, but it appears to be a portion of the limestone of which the rock of Malta is composed. With the advantages of climate and situation that it possesses, much more would be done for the prosperity of the island, did not the spiritual government of the people trammel their inclination towards improvement. Catacombs of some extent are to be seen cut into the rock, but they contain nothing interesting. There are caves and subterranean chapels pointed out, said to have been used by the Apostle Paul after his shipwreck on the island of Melita. Persons who arrive at Malta in packets would be liable to the same quarantine as is observed by men-of-war, the duration of which only extends to a fortnight. Those who proceed onwards on their voyage will suffer no inconvenience from this arrangement beyond their not being permitted to land at the intermediate station, for they will be entitled to pratique before their arrival in England. The quarantine regulations, as they at present exist, are imperfect, and liable to constant variations. There can be no doubt, if the attention of the British government were called to the subject much alleviation would take place in the present system of rigorous confinement, founded chiefly on prejudice.

Those who can forego the pleasure of speedily reaching home, and who pursue what is termed the overland route between Malta and England, will pass a channel of 60 miles that separates the former island from that of Sicily. Their progress onward, particularly through Italy, will be attended with such interest and variety as will make it most desirable. They will pass through countries that flourished in the middle ages of the world, and which are now filled with monuments and remains of power and skill. The oriental traveller will find a link between the lost history of the ancient east, and the present nations of the modern west, that cannot but afford him satisfaction.

The author will now proceed to point out a route by which a knowledge of the countries alluded to may be attained and made applicable, if not beneficial, to many. Having this end in view, he will offer no apology for endeavouring to forward its adoption, by attaching these pages of description to an oft-beaten tract.

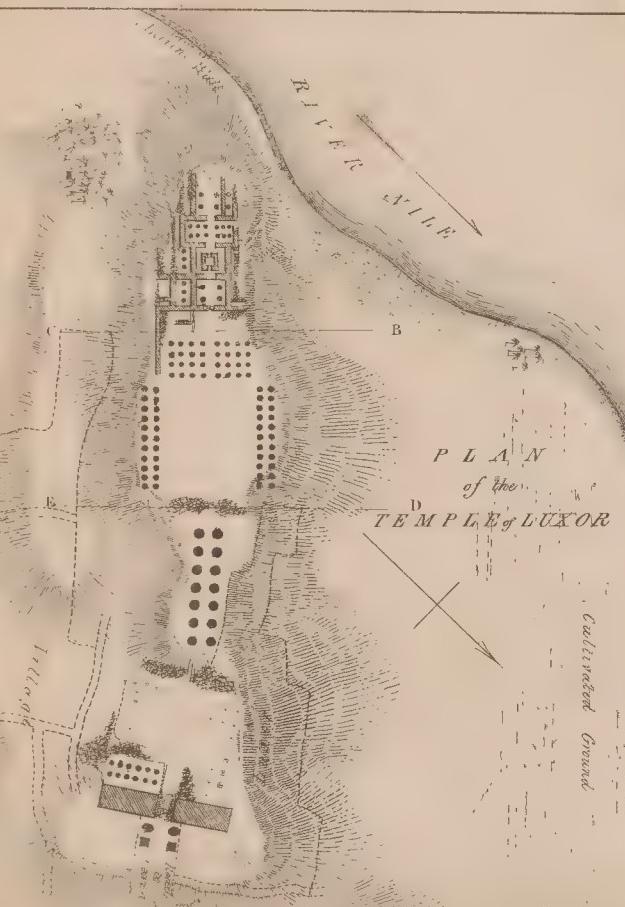
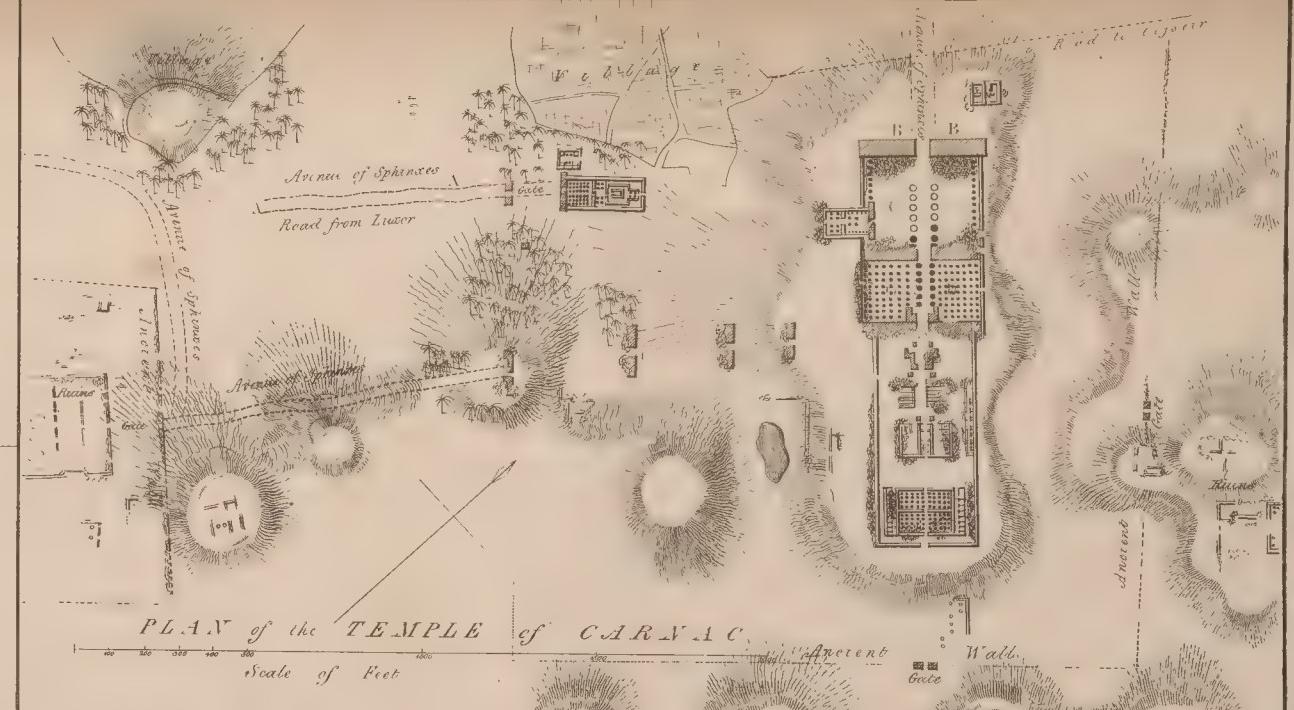
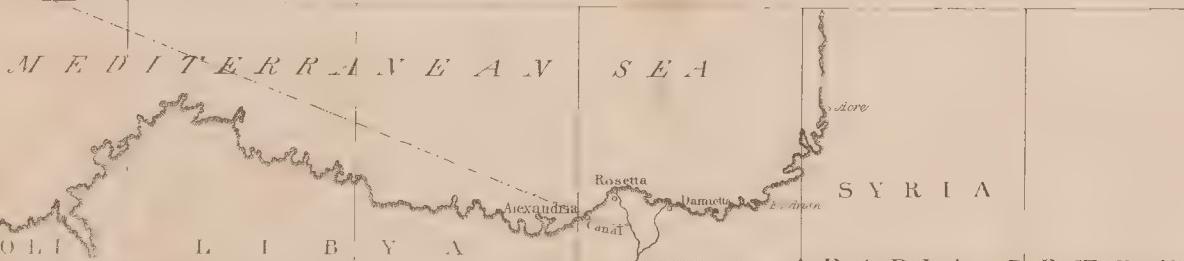
Outline Map
to illustrate a Plan for Steam Navigation, between
BOMBAY and LUXOR via EGYPT;

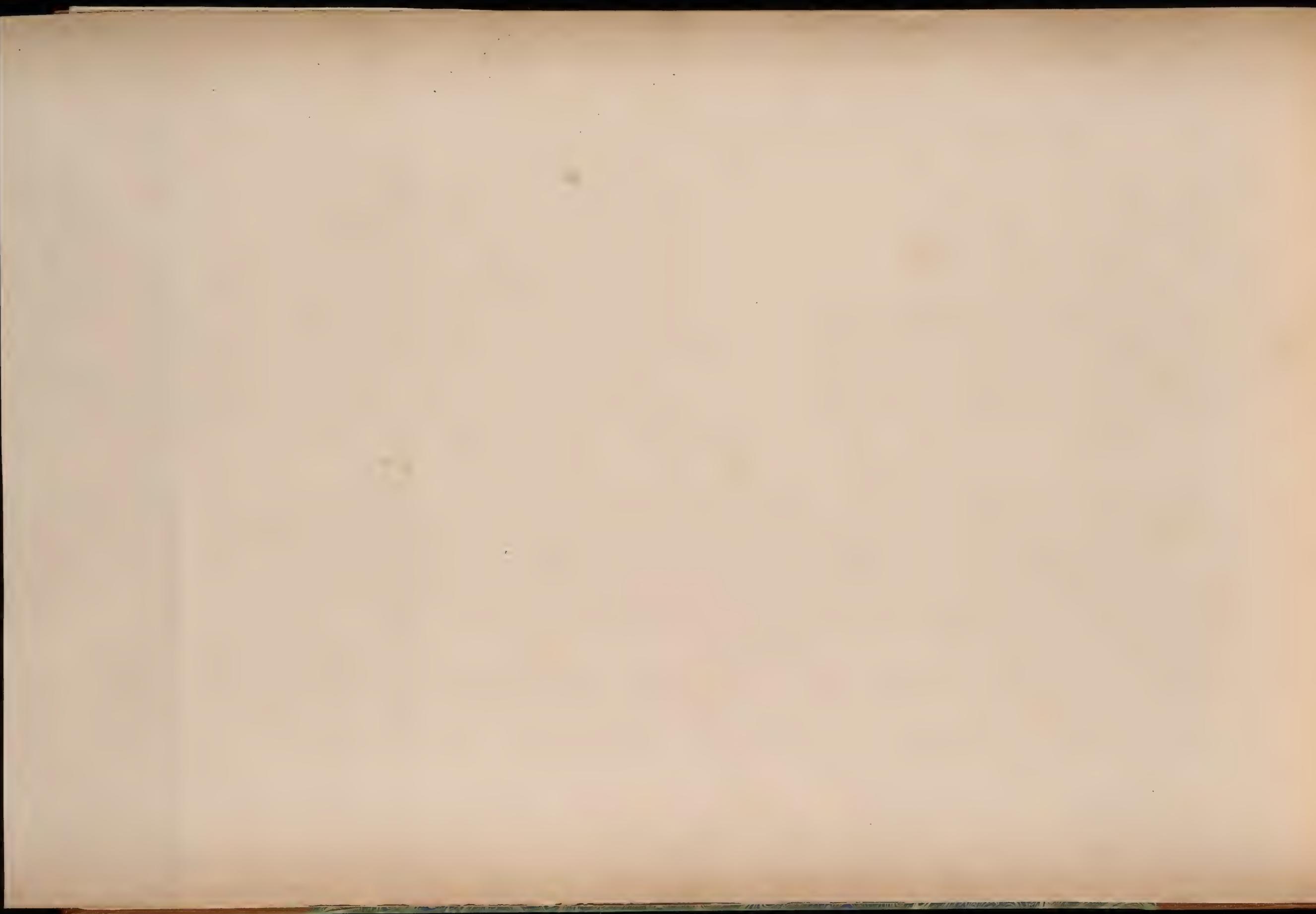
Distance from Bombay to Suez	164 miles
Bombay to the straits of Bab-el-Mandeb	323
Socotra to the Island of Socotra	117
Socotra to Island of Camaroon	835
Camaroon to Cyprus	793
Cyprus to Suez allowing for course	20
Suez to Alexandria	237
Malta to Alexandria	—
From Suez to Cairo	Miles 71
Cairo to Alexandria	120
The distance on the map is to be read by middle latitude as 1.5 miles to the mile.	

by Capt. C. F. Head

Bombay	18° 56' N	72° 52' E long
Socotra	12.22	54.23
Aden	12.45	45.40
Camaroon	4° 40'	42.44
Cyprus	36.8°	34.45
Suez	30	32.20
Alexandria	31.11	30.16
Malta	35.4	4.31

MALTA





PROJECT

FOR

ESTABLISHING AN EIGHT WEEKS' COMMUNICATION BETWEEN ENGLAND AND INDIA, BY THE MEDITERRANEAN AND THE RED SEA, THROUGH THE APPLICATION OF STEAM POWER TO PACKETS.

THE Ancients remarked, that the discovery of a direct communication from the Straits of Bab-el-Mandel to the shores of India brought that country nearer to the rest of the World, and the event is recorded as a great triumph of science and skill. It remains for the present generation to crown the march of enterprise and improvement in the nineteenth century, by reducing the period of intercourse between Great Britain and India to one-half the time it has hitherto averaged, and to maintain it with the capital of our Eastern possessions, through a regular and safe channel at the rate of two months' time. The capabilities of the places named as dépôts, their distances from each other, and the opinion of qualified persons on the power and capacity of steamers, leave no doubt as to the practicability of the object. An enquiry as to the result of such an undertaking leads to the assumption that this desideratum will be accomplished without any expense to the public, who, on the contrary, will, in all probability, derive a large increase of revenue by carrying it into effect. I shall proceed to point out the proposed plan for a Post Office communication between England and India through the ancient channel of the Mediterranean and the Red Sea, confident that an undertaking of such moment, involving the interests of thousands of Englishmen and millions of British subjects, will receive a fair share of support. The items of expenditure adduced in this enquiry are from estimates given by competent persons, and will be tested by results drawn from a voyage made by the Enterprise steam vessel from England in 1825, round the Cape of Good Hope to India, the distance and duration of which form unquestionable data, though excluding many benefits that might be gained by adopting improvements subsequently made; considerations which cannot fail to weigh greatly on the present occasion. It must also be remembered that all probable expenses are enumerated, whilst the benefits and

receipts likely to arise, with the exception of those of the Post Office, cannot at present be ascertained. When the route is known, and security fully established, it will, no doubt, become the channel for the conveyance of specie and valuable articles of small bulk. Experience will also suggest many arrangements that must lead to economy, and reduce the expenditure far below the present estimates.

The review of the Post Office conveyance will be followed by the consideration of a route whereby passengers proceeding to and from India may also benefit by establishing steam passage vessels. Remarks will be added on the means that at present exist to prosecute this journey, independent of assistance from steam vessels, with its probable duration and expense. An inspection of the Outline Map, attached to this work, will shew the track from Malta to Bombay. The dotted line is for passage vessels, the other for packets. Arrangements to forward the communication between England and Alexandria are proposed to be connected with the steam packets, which at present proceed monthly to Malta.* The establishment between Suez and Bombay will, we presume, be most ably conducted by the Indian Navy, a great part of which has been recently employed to make a survey of the Red Sea, whilst the superintendant † stationed at Bombay, from his active habits and experience, would ensure the most favourable introduction to the attempt. The advantage accruing to Government from the command of this additional force of steam vessels, in a political

* This project is made to dove-tail with the movements of the Mediterranean Packets, according to a printed report by Admiral Sir Pulteney Malcolm, dated 16th January, 1832, from which much valuable information has been derived.

† The public are indebted to this officer for having planned, and caused to be successfully executed in 1830, the first voyage made by a steam vessel between Bombay and Egypt. Two other voyages have since been made also under his superintendance.

light, is of itself a matter of sufficient importance to demand separate notice. The passage across the Isthmus of Suez, to connect the above establishments, is admitted by all recent travellers to be perfectly safe and easy. Every facility is offered by the friendly disposition of the Government of the Pacha of Egypt, who, from motives of interest, is led to court a close alliance with England. All persons who have visited Egypt of late years attest the friendly conduct of Mohammed Ali towards British subjects, and many think the liberal policy of the enlightened Moslem does not meet a due return. It is evident that Europeans of other nations, more alive to their interests, are by every means working into the confidence of his government. Their schemes are fortunately frustrated from natural causes. Like a vast garden, Egypt requires a market for her redundant produce, and must lean towards the ruler of the sea. The battles of the Nile and of Alexandria are remembered, and have left a strong and beneficial impression. The country is an infant in civilization and power, and courts the protection of England.

The home division of the proposed steam establishment will unite itself with the Post Office steamers that at present run each month in the year between Falmouth and Malta. The passage between those ports averages throughout the year sixteen days, including two days' delay at Gibraltar. In each voyage a vessel may be reckoned to have her steam up 14 days, or 336 hours, and will have gone a distance by course of 2250 miles, thereby making her rate of passage upwards of six and a half miles an hour. If two days' delay be allowed at Malta, and the same rate of motion be continued onwards to Alexandria, (a distance of 837 miles,) it will be found that a mail will reach Alexandria in 24 days after its departure from England. A glance at the Outline Map will show the proposed route in continuance to India. Cairo, situated

APPLICATION OF STEAM PACKETS TO NAVIGATE BETWEEN EUROPE AND INDIA.

between Alexandria and Suez, and about mid-way from the Mediterranean to the Red Sea, may be reached from Alexandria by a land journey of two days, and, as will appear by the Journal that accompanies this, there is no difficulty in travelling from Cairo to Suez in two marches. But suppose six days are allowed for passing from the Mediterranean to the Red Sea, (altogether 175 miles,) the latter will be reached in 30 days from the time of departure from England.

Between Suez and Bombay a dépôt, or place of supply, is proposed without the Straits of Bab-el-Mandel at Aden,* distant by course from Suez 1323 miles. At Aden, as at Malta, two days will be sufficient to replenish stores from a floating magazine. Another stage of 1644 miles would reach Bombay. Computing the rate of transit as already named, or six and a half miles an hour,† it would take eight and a half days to proceed from Suez to Aden, and from the latter place to Bombay ten and a half days would be required. The steam would therefore require to be up altogether about 456 hours to perform the whole distance of 2907 miles, which separates Egypt from the shores of India. If to the above nineteen days the delay be added of two days at Aden, a packet will be found to pass between Suez and Bombay in twenty-one days, making a total of fifty-one days for the passage of the mail between Falmouth and Bombay.

From Bombay‡ the distance by the *dak*, or post road, is 1265 miles to Calcutta, and to Madras by the same line of route the journey is 836 miles. Mails in India are conveyed by horse or foot *dak*, and travel at the rate of six and a half or four miles the hour.§ If the most expeditious

* A modern authority of unquestionable credit, says: "Aden, a town celebrated from the remotest periods for its commerce and the excellence of its harbours on the Indian Ocean."—*Malte Brun*. For an account of Aden, see *Journal*.

† It will be shewn in a more advanced stage of this enquiry, that this voyage between Bombay and Suez was performed by a steamer at an average rate of more than seven miles an hour. The speed of the Enterprise, with 200 to 250 tons of coal on board, is reported to be six and a half knots to seven knots an hour, under favourable circumstances. The Leith and London steamers perform the double voyage between those places, or 1000 miles at their average rate of movement in 104 hours, being more than nine miles an hour.

"H. M. steam packet Firebrand, in 66 days during the present season (1832) has traversed a distance of 11,500 miles of sea, averaging a rate of 7½ miles per hour." (See *United Service Journal* of December, Article 'Steam Naval Warfare'.)

‡ Itinerary, by Captain John Clunes, Hon. East India Company's Service, Bombay Establishment.

§ This speed might be greatly improved by introducing camel *hukurrah*.

of these conveyances be adopted, letters from England that reach Bombay in fifty-one days will arrive at Madras in less than fifty-seven days, and may be distributed at Calcutta, our seat of government in the East, in about fifty-nine days, or in two months from their departure from London. An investigation into this statement will shew that the time here specified is, in all probability, more than would be required to attain the proposed object even on a first endeavour.

Sufficient experiments have been made throughout this route to shew the practicability of the project; yet, with all the advantages it holds out as a general benefit, as a commercial arrangement, and as respects individual accommodation, no effort seems making to forward its accomplishment. Volumes might be filled with the advantages to be derived from accelerated intercourse with our empire in the East, and every journal written in India contains some appeal to the mother country calling for its early adoption. The object of this work is to place the whole scheme in an obvious light, that may at least promote its accomplishment, or lead to a further enquiry into its merits. A rapid view of the Post Office route has been taken; the project will now be investigated in its different stages, and a balance sheet produced exhibiting the result. Individual accommodation will also be considered as regards steam packets unconnected with steam passage vessels, or the facility of proceeding by means of native conveyance.

Enquiry will first be directed to the size and expense of such vessels as are considered to be of a capacity best suited to the navigation of the seas on either side the Isthmus of Suez. In forming these estimates, attention has been given to the opinions of several professional men, and of persons possessing local knowledge of the various places in the route. Practical operations of steamers in the Eastern and Western World will be found to confirm conclusions that have been arrived at. Sufficient data, it is presumed, will be adduced to admit of, at least, an approximate estimate of the receipts and expenditure likely to attend the establishment. The merits and importance of the plan and object will outweigh all minor considerations. The home voyage, or the stage of the undertaking between England and Egypt, will be examined separately from that necessary to connect Egypt with India.

A printed Report on the "Falmouth Packet Establishment" has recently appeared, which contains arrangements that materially affect the plan under consideration. The statement in question was drawn up in the present year (1832) by Vice-Admiral Sir Pulteney Malcolm, K. C. B.,

by order of the Lords Commissioners of the Admiralty, and its suggestions have since been adopted. It is desirable on various grounds, as far as possible, to proceed upon regulations matured and sanctioned by such high authority, and the plan about to be proposed for the mail to Alexandria will be found to do so. Henceforth a monthly government steam vessel is to sail to Malta, and after remaining there three days it will return to Falmouth. The mails for the Ionian Islands and Greece are to be forwarded from Malta on the arrival of this packet, by a branch steamer, which will have made its tour and collected mails to return in time for the succeeding English packet. To apply the above arrangements to the Indian communication, it will be necessary to appropriate a steam vessel to the duty of conveying the mails between Malta and Alexandria. The voyage between these places has already been mentioned as requiring five and a half days, but throughout these calculations six days is the time allowed for this stage of the voyage. To make its accomplishment in the required time the more certain, a branch steamer, with engines of 140-horse power, and of 440 tons burthen, is proposed for the service.* Such a vessel would, in all probability, accomplish much more in speed than has been here estimated; she would be competent to take a full supply of stores for the time she may require to be absent from Malta, and also to carry coals for her voyage to Alexandria and to return. A sketch of her movements for one month will suffice to shew her capabilities of performing the duty for an unlimited time.

The Mediterranean packet departs from Falmouth some time in the beginning of each month. Suppose she start on the 1st, she will arrive at Malta on the 16th of January, and leave that place to return to Falmouth on the 18th of the same month. The branch steamer above alluded to will arrive at Malta also on the 16th, from Alexandria, having left the latter place with the Indian mail on the 10th of January. She will exchange mails with the English packet, and sail again for Alexandria also on the 18th, where she will arrive on the 24th, and remain until the 10th of the following month, at which date the Indian mail will again arrive, to be forwarded by her to Malta, there to meet the Falmouth packet as in the preceding month. Although the

* The engines of a vessel similar to the above will weigh about 120 tons. She will consume in eleven days, or during the double voyage, less than 205 tons of coal, allowing 15 cwt. 2 qrs. per hour. Nearly 120 tons will remain for accommodation and ship's stores, the latter being very trifling for so short a voyage.

16th is the date here fixed for the arrival of the mails at Malta, it is evident that any other date may be equally conformed to, providing it be known at Bombay, so as to cause the Indian mail to reach Malta the day the packet from England arrives at the same place. By the proposed plan it will be seen that the branch steamer will in each month be twelve days at sea, sixteen days at Alexandria, and two days at Malta. This voyage has an extent of only 837 miles, and it will be well to note the fate of despatches recently transmitted by this route. They were brought from India to Egypt by the Hugh Lindsay, and the whole expense attending their transmission could not have been much less than £5000. The steamer landed her mail in Egypt twenty-eight days after leaving Bombay. The same despatches were only fourteen days by the steam packet between Malta and Falmouth, but they were sixty days in getting from the Red Sea, and proceeding by a sailing vessel to Malta!* Such instances of failure are at all times equally liable to occur, and most forcibly point out the necessity of a connected chain of steam communication throughout this line. A single link in such a project left incomplete, will continually subject the public to keen disappointment, as the following instances more fully prove. "Lord Keith, with seven sail of the line and two frigates, was a month beating from Alexandria to Malta. Many of the transports with French troops from Cairo were four months reaching Marseilles."†

Steam packets of between 400 and 500 tons, and of 140-horse power each vessel, are those proposed by Sir Pulteney Malcolm in the Report already alluded to for the Mediterranean voyage, as being sufficiently commodious for carrying stores and supplies, and possessed of every quality to enable them to perform their varied duties. They will also accommodate about twenty passengers. A vessel of a similar kind is recommended as the medium of communication between Malta and Alexandria. The consumption of coals for this class of steam vessels is computed at 21 bushels, 56 lbs. per hour, or something less than nineteen tons each day. The price of coal at Malta is 24*s.* per ton, and the branch steamer between Malta and Alexandria will take a supply of

* The Morning Post of April 21, 1832, has the following extract: "The Firebrand steamer arrived at Falmouth with a mail from Bombay. The mail left Bombay on the 5th of January, arrived at Alexandria in twenty-eight days, and from Malta to Falmouth in fourteen days, having been detained in the voyage from Alexandria to Malta by the sailing vessel sixty days."

† Wilson's Expedition to Egypt.

coal for a voyage to the latter place, and for a return. It has also been stated that to perform this voyage she must have her steam up 129 hours. If we therefore conclude that for eleven days she will consume at the rate of nineteen tons of coal per day, at a price of 24*s.* each ton, the monthly cost for fuel will come to £250 : 16*s.*, or a sum of £3009 : 12*s.* will be required to cover the annual expense of twelve double voyages between Malta and Alexandria. The following annual charges for such a vessel must also be added, being the estimate in Sir Pulteney Malcolm's Report.

	£. s. d.
The first cost and outfit of such a vessel £12,000, duration 20 years	600 0 0
A complete repair and three sets of boilers once in 20 years, £4000	200 0 0
Wages for the crew	1200 0 0
Victuals for the crew	565 0 0
For the repair of the vessel's hull and machinery, and for stores	400 0 0
	<hr/> £2965 0 0
Cost of coals for one year, (as above)	3009 12 0
Making a total of	<hr/> £5974 12 0

This constitutes the additional expense that would be incurred in the Mediterranean to carry the proposed plan into complete effect. Proceeding eastward in our investigation, it will be necessary to make provision for an agent in Egypt to forward the arrangement in that country, and afford such assistance as may be requisite in facilitating it, also to ensure regularity in the conveyance of the mail and of couriers across the Isthmus of Suez. A sum of twenty pounds per month will keep up an establishment of twelve dromedaries or fast camels. By such precaution the mail would always be secure of regular transport for the 175 miles that separate Alexandria from Suez,* and the few passengers who for various reasons may wish to continue their voyage without longer delay, would also be able easily to accomplish it. To ensure the super-

* From Alexandria the distance by route to Cairo, when the country is free from inundation, is about 100 miles; at other times it is more circuitous, and extends at the Pyramids of Djizeh. The distance from Cairo to Suez is known to be 70 miles. A dromedary could perform a 100 mile journey in less than 24 hours. Horses may be obtained for this journey, if preferred. But the obstacle that arises is likely soon to be quite removed, for it has been lately stated in an English newspaper that a stage coach was shipped to run between Alexandria and Cairo. No doubt the same conveyance will be continued to Suez. The route will be seen by the Journal to be perfectly practicable.

intendance of a competent agent, one thousand pounds for outlay will be attached to the annual expenditure.

We have now arrived in the Sea of Suez, and as that distant portion of our route is very imperfectly known to most Europeans, an endeavour has been made to illustrate the character of those regions by means of the Journal. The nature of the climate, the navigation of the sea, the resources of the country, &c., are therein considered, and such information given as may be useful to future travellers. Those details are coupled with this outline sketch, the success of whose object must mainly depend on the general character of the territory the route is made to pass through.

The packet establishment in the Eastern Seas would come under the authority of the Bombay Government, and would be manned by the Indian Navy. By this means an invaluable acquisition of force and of scientific knowledge, ready to act on any emergency, will be attained by government.

Before entering more into detail concerning the navigation of these distant seas, a few observations will be made on the voyages that have been already performed by steam vessels in the Red Sea, and other data on which the enquiry is founded.

Three double voyages by a steam vessel have been performed between India and Egypt, and they have completely established the practicability and security of this project. The credit of successfully executing them is due to the superintendent of the Indian navy, but the inadequate means afforded him have in a great measure checked the beneficial effects expected to arise from the experiments, and have prevented their more general application. The Hugh Lindsay, a fine man of war steamer, of two eighty-horse power engines, with a burden of 411 tons, and having a length of 145 feet, is the only steam vessel that has been seen in the Red Sea; she was built of teak, at Bombay, in 1829, pierced to carry eight guns; capacity for stowage was not so much attended to in her construction as speed, a qualification thought indispensable for her duties as a man of war. Her proper draught was attained when laden with six days' coal. In the voyage we now allude to, a run of upwards of 1641 miles, not less than nine days' coal, is indispensable. The high price of coals on this route is another reason why the Hugh Lindsay was totally unfit for the service. Her voyages, however, offer many useful points to illustrate the enquiry before us; at the same time, the preceding defects, and a want of arrangement at the different stations for fuel, must exclude the result of them,

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as absolute data, for estimating the expenses under this head. The vessels now proposed as best suited to the performance of the duties required of them, are steamers of 340 tons, built with a view to the capacity of stowing coal, and to carry two sixty-horse power engines. The expense of such vessels, compared to that of the Hugh Lindsay, would be as 15 to 22, or in proportion to their consumption of fuel.

The first voyage made by the Hugh Lindsay was in 1830, when she left Bombay the 20th of March, and arrived at Suez the 22nd of the month following. On leaving Bombay she steamed to Aden, a distance of 1641 miles in 260 hours, giving an average rate of more than $6\frac{1}{4}$ miles an hour. She stopped also at Mocha and at Jiddah; altogether her steam was up during the voyage between Bombay and Suez 21 days and $9\frac{1}{2}$ hours. Owing to the want of arrangement in getting her supplies of coal, she was at anchor nearly twelve days. On the 29th of May the Hugh Lindsay returned from Suez to Bombay, having had her steam up 19 days and 18 hours during the latter voyage. The distance she ran in the double voyage, without the occurrence of an accident, was 5928 miles, which she performed in 41 days and $3\frac{1}{2}$ hours steaming. The Hugh Lindsay will be found then to have been 70 days absent from Bombay, of which time she was nearly 30 days at anchor, detained by laying in supplies of coal, water, &c.

The second voyage made by the same vessel was in December 1830, when her course was from Bombay to Maculla, and thence to Jiddah and to Cosseir. In performing this voyage of 2800 miles she was only $16\frac{1}{2}$ days actually under steam. In her return voyage to Bombay there was a failure of coals at the dépôt in the Red Sea, and consequently a great detention. It will be seen that the average of her run throughout the voyage to Cosseir is above seven miles the hour. Sir John Malcolm returned by this opportunity from his government at Bombay;* he did not hurry his journey through Egypt, or he would have arrived in England within two months. Sir John Malcolm's voyage from Egypt to Malta by a frigate, was eleven days; from the latter place he proceeded in the regular steam packet. The third voyage was made this year, and was from Bombay to Maculla, to Jiddah and to Cosseir, making a distance as above of 2800 miles, which the Hugh Lindsay per-

* The account of this voyage, furnished by Sir John Malcolm, is in the third volume of British India, in the Edinburgh Cabinet Library.

formed in 19 days $6\frac{1}{2}$ hours' steam.* The delay for coal in this voyage was only 5 days 15 hours, making the total voyage, including stoppages, under 25 days. The Hugh Lindsay, as already stated, was from necessity overladen when she began her voyage, at which period she advanced only at the rate of $5\frac{1}{2}$ knots an hour; her speed was increased to 9 knots an hour when about mid-voyage, and in proper trim. Notwithstanding these disadvantages, the time of transit from India to Egypt has been brought, exclusive of delays for fuel, to a shorter rate than is allowed in this project. Enough has been done by these voyages to show the perfect feasibility of our plan when the proposed alterations are effected. It is also proved that facilities exist at Aden to allow the necessary supplies of fuel and water to be obtained. It only remains to enquire more minutely into the means that exists to improve the arrangements, and render them available to general purposes. The following remarks on the first steam vessel that proceeded round the Cape of Good Hope will be read with interest.†

The Enterprise steamer has been already alluded to, as having made an experimental voyage from England to India by way of the Cape of Good Hope. She was built at Deptford in 1825, and was fitted up with two 60-horse power engines. This vessel failed in reaching India in less than sixteen weeks after her departure from Falmouth, in consequence of the distance between the dépôts for coal being so great, as to oblige the steamer to consume her fuel, and to have recourse to sailing. The exertion of her commander, Captain Johnston, in this spirited undertaking to guide a vessel round the stormy Cape, by the aid of machinery, has been most beneficial to science, and affords much useful information that is applicable to our present enquiry. A single station for receiving the supply of fuel was determined on, in a voyage which, under the most advantageous circumstances could not be less than 12,000 miles. The Enterprise was therefore started from Falmouth with 380 tons of coal, which quantity it was expected would enable her to reach the Cape of Good Hope, but from the circumstance of her being overladen, her proper speed was reduced, and she fell short of coal long before arriving at her destination. Another supply of fuel was ready at the Cape of Good Hope, and the Enterprise continued her voyage from that station

* The gentleman who furnished me with the particulars of this voyage left the Hugh Lindsay at Cosseir. I have not seen an account of her further progress.

† From an account of Steam Vessels, and of Proceedings connected with Steam in British India, compiled by G. A. Prinsep, Esq. published at Calcutta, 1830.

with 350 tons of coal on board. The same failure of *materiel* again occurred as in the preceding voyage, and a vexatious detention was again experienced. The inaptitude of a single dépôt of fuel to answer for the voyage between England and India is, from the result of this experiment, completely proved, and will be evident from the following result: the Enterprise was under steam 62 days 23 hours, under sail 40 days 3 hours, at anchor 10 days 15 hours.

Captain Johnston in a statement made on this interesting occasion remarks, "The distance traversed by the Enterprise during this voyage was almost 13,700 miles. The quantity of coals consumed was 580 chaldrons, and, including one excursion at the Cape of Good Hope, we steamed altogether about sixty-four days, making the daily consumption of coals nine chaldrons, or about twelve tons." The Enterprise being overladen during a part of this voyage, and brought down to sixteen feet draught, when her proper sailing draught was only twelve to twelve feet six inches, prevents a fair estimate being given of that vessel's rate of going: The following remarks of her capabilities are therefore added from a work already mentioned.* "With 300 tons of coal, at a draught of fourteen feet, her rate is six knots; and with 200 to 250 tons, drawing twelve feet to twelve feet six inches, which Captain Johnson considers her best draught at sea, her speed will be six and a half to seven knots under favourable circumstances.

It has been stated that steam vessels of two sixty-horse power engines possess every requisite quality for the performance of the duties that may be required of them. Such a vessel registering about 340 tons will be able to stow away the greatest quantity of coals demanded for any stage of the voyage, which will be shewn to be under 150 tons.† She will also be capable of accommodating eight or ten passengers, besides having room for her crew and stores. To give full effect to the enterprise, three of these steam vessels ought to be at the disposal of the Bombay Government. A sketch of their movements for a few months will be sufficient to show their power to keep up the commu-

* G. A. Prinsep.

† A fine steamer, called the Forbes, was launched at Calcutta in 1829, and carries two sixty-horse engines with a copper boiler. Her register is 302 tons, and she started from Diamond Harbour 14th March, 1830, having on board 134 tons of coal. On the return trip she took in 145 tons of coals, 10 of fire wood and dammar, besides 12 tons of tin and specie. The Forbes carried coal for 11 days, her consumption was half a ton per hour.—G. A. Prinsep.

nication for an indefinite period. On a closer investigation of this subject, should it appear that vessels of a larger capacity, possessing more power and greater speed, are desirable: * the substitution of steamers with two seventy-horse power engines, similar to those to be used in the Mediterranean service, will cause an increase of expenditure in proportion as 14.5 and 18.5. A larger description of vessel will no doubt be used when a knowledge of the route having given confidence, it becomes more desirable for passengers.

Suppose A, B, C, are three steam vessels proposed for this communication, the following will be their average passage throughout the year.

Leave Bombay.	Arrive at Suez.	From Suez.	Arrive at Bombay.
A 16th December.	6th January.	30th January.	20th February.
B 16th January.	6th February.	2nd March.	23rd March.
C 13th February.	6th March.	30th March.	20th April.
A 16th March.	6th April.	30th April.	21st May.
B 15th April.	6th May.	30th May.	20th June.
C 16th May.	6th June.	30th June.	21st July.

This table will shew that the steamer A is 21 days on her voyage from Bombay to Suez, where she remains 24 days waiting for the mail; she is again 21 days on her return to Bombay, where she remains also 24 days before she is called upon to undertake another voyage to Suez. Each vessel is required to perform the same routine of service, making two voyages of 21 days every three months, and resting alternately for 24 days at each extreme station. It will also be seen, that except for a few days, or from the middle of each month to about the 20th, there will always be a steamer at Bombay at the disposal of government, and there will likewise be a steamer at Suez the last three weeks of each month, which arrangement will afford a great convenience to passengers proceeding to India. The next point to be considered is the consumption of fuel for vessels of the specified capacity; this is computed at 16 bushels, or 11 cwt. 48 lbs. of coals per hour. † Aden, which is the place fixed upon as the dépôt for fuel, is between Bombay and Suez, and

* The United Kingdom, 200-horse power, 550 tons, sails from Leith Roads to Greenwich, and returns, making a voyage of 1000 miles in 104 hours; takes a supply of coals from Leith to Greenwich and back, or 120 tons, and consumes on the above voyage 110 tons.

† By Captain Johnson's statement, the Enterprise steamer, which had the same size engines as those proposed for this voyage, consumed on an average, during 64 days' steaming nine chaldrons, or about twelve tons per day, or 10 cwt. per hour.

has already been described in the Journal. The harbour seems peculiarly adapted to the use that may be here required of it; it has an advantage in being far enough removed from the Straits of Bab-el-Mandel to be free from the strong breezes that prevail there, which raise an insurmountable objection to Mocha.

At Aden there are two harbours easy of access, and affording shelter from every wind. Water may be had at a convenient distance, and to obtain it there are two hundred Arab families with as many Jews, ready to afford every assistance, with the hope of improving their impoverished state. A trade is now kept up between Aden and Africa, and sheep were selling at 3s. 6d. each; there can be no doubt but a well-supplied bazaar would soon be established at Aden, if encouragement and protection were afforded to traders by establishing there a permanent dépôt. It would be desirable to have a floating store-ship or magazine within the Western harbour, which is well suited to the purpose; by such an arrangement much delay and expense would be avoided, and a ready supply of coal and water would be secured to the steamers in the time allowed for replenishing stores. A further recommendation to Aden is its situation outside the straits of Bab-el-Mandel; vessels from Europe to Bombay can touch there for six months in the year, with a deviation from their course that would cause but a trifling delay. Horsburgh, in his Directions for Navigating the Eastern Seas, recommends that ships proceeding on their voyage during the south-west monsoon, or from April to November, should pass through the Mozambique channel,* which course takes them near the Island of Socatra, (see Outline of Map.) A delay of one month would be more than is requisite to deliver a cargo of coals at Aden. A great increase of expense must attend the landing of coals at any ports within the Red Sea, owing to the periodical winds that prevail for months, and are always strong in the straits of Bab-el-Mandel. From Aden during the season specified, fair wind would prevail for continuing the voyage to Bombay. At Aden, with such advantages coals would be had at an increase of 15s. per ton above those in the Bombay market; it is there-

fore calculated that coals could be furnished at Aden for the use of the steamer at 50s. per ton, and they would be conveyed to Aden by vessels proceeding from England to India for freights of cotton. A detention of one month caused by this deviation from the direct track will be compensated by a cargo that, according to our calculation, will render a freight of nearly 40s. per ton, ten or twelve shillings being about the price for which coals may be shipped at favourable stations in England. But how different the estimate of expenditure would be in this undertaking if it derived support from government. The ships of the Honourable Company that proceed annually via Bombay to China, almost in ballast, would be able to supply fuel at a comparatively trifling expense; this item taken at 50s. per ton may be considered at double the probable cost, and Aden being the middle station requires twice as much as any other. A glance at the Outline Map will shew that no other place on the route offers such facility as Aden for the proposed dépôt. The Island of Socatra is only 1137 miles from Bombay, and consequently nearly 1900 miles from Suez. Maculla, on the coast of Arabia, has been used as a station. This port has much to recommend it, but it is not sufficiently mid-way to admit of its use as a single station: it is 1400 miles from Bombay, but is between 1800 and 1900 miles from Suez; and is therefore with Socatra excluded as inapplicable to the present project. It will be seen, that when the Hugh Lindsay steamer touched at Maculla on her voyage from Bombay to Suez, she also stopped at Jiddah, a station in the Red Sea. Suez forms another station in this route: for a description of which, and the intermediate country between it and Alexandria, the reader is again referred to the Journal. The outer harbour at Suez affords anchorage for vessels of any size, and it would be desirable that a store-ship, or floating magazine, be stationed there as at Aden. It has been mentioned that Suez has no water in its immediate vicinity but what is brackish; the natives use it, and it would answer all ordinary purposes on board steamers; boats may be detached to the fountains of Moses for better water, where the wells, as will be seen by the Map, lie close to the shore; or a supply of good water may be procured at the port of Tor, lower down the Sea of Suez, and at this place other supplies may also be obtained. Coals are at present conveyed to Suez from Alexandria, to which place they are brought from Europe. Many vessels proceed annually from England, particularly from the port of Liverpool to Alexandria, in ballast, for the purpose of bringing return cargoes from Egypt. The freight to that country is therefore as

* The route by the Mozambique channel is more direct than any other for ships bound to Bombay, &c., when the south-west monsoon prevails on these coasts; for it predominates in the Mozambique channel at the same time. "The south-west monsoon, which is the fair season in the Mozambique channel, begins in April and continues till November; the north-east monsoon then commences, and prevails until April."—Horsburgh's India Directory.

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low as 22*s.* per ton, and coals would cost when re-shipped in boats at Alexandria about 35*s.* per ton, being 2*s.* 6*d.* per ton more than they are sold for in the market at that place. From Alexandria the carriage by water to Cairo would raise their price to 40*s.* At the latter place any number of camels may be had for the journey to Suez at 5*s.* each, and three camel loads would be more than a ton weight. If 5*s.* per ton, in addition to these charges, be added for casualties, the expense of coals at the magazine at Suez will be exceeded, if the price is fixed at 60*s.* per ton. This estimate will be taken in the calculations that are to follow. It is very probable that fuel may be sent by sea to Suez at a cheaper rate.* The voyage between Aden and Suez being forty-eight hours less than the voyage from Bombay to Aden, there will be above twenty-five tons of spare burthen on leaving Aden to be appropriated as may be most desirable; an extra supply of water for the return voyage may therefore be carried on to Suez, unless the late discovery of water in the vicinity of that place renders such a proceeding unnecessary.†

Bombay is the remaining station to be considered. The position of the harbour with regard to the adoption of our project, its artificers, and its capabilities as a general dépôt for shipping, require no comment. The circumstance of that station being the head-quarters of the Indian navy, and the residence of the superintendants, are additional recommendations.

At Bombay the price-currents in the Asiatic Registers of January, 1830, 31, and 32, give the price of coal an average rate of 20 rupees, or 35*s.* per ton, each rupee by the same authorities have a value of 1*s.* 9*d.* sterling. A voyage from Suez to Bombay, and back to Suez, will therefore cause coals to be consumed for 204 hours at 60*s.* per ton, for 456

* Mr. Prinsep states in relation to navigation in India, "The Forbes steamer, of two sixty-horse engines, and of 300 tons, took a ship of 382 tons in tow; the steamer had 134 tons of coal, the other vessel had 52 tons to assist the steamer, and a cargo of 840 chests of opium; they left Calcutta 14th March, 1830, and arrived at Singapore the 27th of the same month." This rate of steaming had been five to five and a half knots, with a favourable wind, sometimes more than seven; they steamed five knots against the monsoon, when moderate. The trans-shipment of coals, which took place three times, caused an average detention of three to four hours. A similar application of steamers as tugs might no doubt be made useful in certain parts of this route, and thereby tend greatly to lessen the expenses of fuel.

† It will be seen by my Journal of the march across the Desert of Suez, that a quantity of excellent water has recently been made to flow from a well excavated between Suez and Cairo, and that the same enterprising individual who caused this discovery is continuing his employment of the English borers who effected it.

hours at 50*s.* per ton, and for 252 hours at 35*s.* per ton. The consumption of coals for the steam vessels to be used in this service has been fixed at 11 cwt. 14 lbs. of coals per hour. By these calculations it is found that the annual expenditure of fuel required for the steamers to perform twelve double voyages between Bombay and Suez will amount to £14,640. It is further estimated, that from £20 to £25 per ton is expended in building steamers and preparing them for sea, which sum is exclusive of machinery. There will be in this case an expenditure for engines, &c. for each vessel of from £7000 to £8000, at Bombay,* making a total outlay, according to the greater estimate of £48,750, on which 8 per cent. per annum will be taken to renew the capital, and for wear and tear, making a yearly charge of nearly £3900 against the fund. In addition, £1500 a year is allowed as adequate to repairs, and also £900 a year for stores for the three vessels. †

It remains to estimate the expense of victualling and paying the officers and crews, who will, we suppose, as far as possible, be drawn from the Indian navy, which arrangement will tend to introduce in that service knowledge, which, in the event of war, will have the most beneficial effect. The arrangement will also relieve the government of a very considerable source of expense, by giving employment to a great portion of their marine establishment. The following may be taken as the probable charge for three vessels.

	B. Rupees.		B. Rupees.
3 Commanders	1200	3 First Engineers	600
3 Chief Officers	600	3 Second do.	450
3 Second Do.	450	3 Third do.	300
6 Midshipmen	360	3 Armourers	120
3 Boatswains	120	24 Stokers	576
3 Carpenters	105	6 Apprentices	48
3 Butlers	60	12 Trimmers	120
3 Cooks	36	54	2214
9 Servants	72	102	Add 3693
3 Serangs	60	156	Total 5907
6 Tindals	90		
60 Lascars	540		
102	<hr/> 3693		

* Leith and London steamers from 390 to 420 tons are most complete, with machinery for £7000, and require little repair for years.

† These calculations are from "An Account of Steam Vessels, and Proceedings connected with Steam in British India," by G. A. Prinsep. Calcutta, 1830.

Provision money for 156 persons, at 4 rupees per month each	624
Additional table allowance for officers, per month	1000
Pay for the establishment, as above	5907
* Total for pay and provisions, per month	Rupees 7531

Which being turned into pounds sterling, at 1*s.* 9*d.* each rupee, average exchange at Bombay by last Asiatic Register, gives £658. 19*s.* 3*d.* as the monthly charge for pay and provisions, or an annual expenditure of £7907. 11*s.* for the same object.

The following is the result of the foregoing calculations:	£. s. d.
Estimate to renew capital, and for wear and tear	3,900 0 0
Pay and victualling of officers and crew	7,907 0 0
Annual repairs and for stores	2,400 0 0
For casual expenses, including two floating magazines at Suez and at Aden, supplies of water, &c.	1,493 0 0
	<hr/> £15,700 0 0
To which is to be added the annual expense for fuel	14,640 0 0
Making a total expense for the establishment in the Indian Seas of	£30,340 0 0

By comparing this estimate with the expenses of steam packets in the Mediterranean, as noted a few pages back, it will be evident that no item is here under-rated. It will be necessary to bear in mind, that the Mediterranean packets are 60 or 80 tons larger than the others, and exceed them by 20-horse power. The probable expenses, exclusive of fuel, for three vessels, such as form the India establishment by those estimated,

* An account of steam vessels, already alluded to by G. A. Prinsep, has been my guide for this item of expenditure. This gentleman, after an able investigation on the subject as connected with India, gives the following opinion: "From such documents as I have been able to procure, the actual outlay per annum for each steam vessel, exclusive of coals, appears to have been forty thousand rupees." The allowance presented in the estimate exceeds the above by nearly fifty per cent. Mr. Prinsep's calculation was for the Irrawaddy, a vessel with two 40-horse power.

Since making the above estimate, I have been favored with the strength of the crew of the Hugh Lindsay. That steamer has been named as having two 70-horse power engines, but it will be seen that her compliment of officers and men are not greater than has been allowed in these calculations. The Hugh Lindsay has

1 Commander	2 Engineers
1 Lieutenant	1 Assistant ditto
1 Master	20 Stokers or Native Firemen
1 Surgeon	
1 Purser	23
10 European Seamen	29
14 Lascars	<hr/> 52 Total.
	29

would be less than £8,895, or little more than half what has been allowed. There is little doubt but the amount of disbursements in these calculations would be found to exceed the total expense of maturing the project, as each part in detail has been put on the most liberal footing.

Here the account of expenditure ceases, without any charge being designedly omitted. An enumeration will now follow of probable receipts, but in this calculation the result must be of a more dubious nature, and leaves greater room for speculation to be decided by experience. In looking to the return likely to arise from the opening of this new line of navigation, some time must be expected to elapse, before prejudices are removed, so as to cause a general transportation of wealth over unknown seas, and across solitary deserts. The immediate return of profit would be the Post Office receipts; and if they are shewn to be equivalent to the expenses of the undertaking, it ought to be at once attempted. The probable return will be shewn far to exceed the expenses even in the first year, and it must be evident that every succeeding voyage will tend to increase the benefits to be expected from this intercourse. A prospectus for establishing steam navigation to India, *via* the Cape of Good Hope, was published some time since by Mr. Waghorn, and affords some useful data for our calculation; among which is the following:

By an official document from the Postmaster General at Bengal, for the year 1828, it is stated that the number of letters received from England that year was	84,673
The number of letters sent from thence to England the same year were	54,222
Passing annually between Bengal and England	<u>138,895</u>

From the situation of Calcutta, it being the most distant of our seaports in India, it will be evident that no letters are sent there for other Presidencies; we will, therefore, take the number of letters set down as the portion for Bengal, and if the relative importance of the two other Presidencies, locally and commercially be considered,* there cannot, in

* The Bengal Presidency has a larger civil and military establishment than either Madras or Bombay; and there are more European inhabitants at the former place. Madras is next to Bengal in its establishments; and this place has importance attached to it, as being the station of the Admiral, and the depot of the British Navy, serving in the Indian Seas. The Bombay Presidency has also some peculiar advantages: Bombay is the station of the Superintendent, and of the Indian Navy, and it is a more commercial place than Madras, from its being situated on the west side of the continent, and from being the channel of communication with the Persian Gulf and the Red Sea.

proportion to the above, be a less number of letters than 100,000 annually passing between England and Madras, and at least 80,000 in the same period are sent between England and Bombay. It is not easy to imagine what the lists will swell to if the doubtful and protracted mode of conveyance now in use be replaced by a means of transit as certain, and having half the duration of the best sailing ship in the most favourable season of the year. The Hon. Company's ship, Thomas Coutts, made the passage from England to Bombay in 84 days, and another ship, the Atlas, in 83 days; and these instances are of such rare occurrence as to be specially recorded.

Before taking a further view of Post Office receipts, it will be proper to shew the anxiety that exists throughout India to promote the change. At Calcutta, in August 1828, a letter was written by the secretary to the Government, addressed to Mr. Waghorn, authorising the following charges, subject to further arrangements, as compensation for conveyance of letters from England to India by means of a steam packet.

	If less than 75 days included.	If less than 85 days included.
For each single letter not exceeding one sicca weight	3 Rupees.	2 Rupees.
If exceeding one sicca, double; if exceeding two, treble; and so on.		
Newspapers	3 , , 2 , ,	
Accounts, law papers, &c., and not containing letters	3 , , 2 , ,	

By this schedule, the postage by the projected route, being under 75 days, would be 5*s. 3d.* for each letter. Another letter to Mr. Waghorn from the secretary to Government at Madras, October 7, 1828, stated "that the Right Honourable the Governor in Council is willing to extend to this Presidency the arrangement sanctioned by the Supreme Government, of levying postage on letters and parcels which may be brought from England to this country on the steam packet which you propose to establish." These communications were in consequence of a projected plan for navigation to India *via* the Cape of Good Hope. Mr. Waghorn failed in establishing it, although his spirit and perseverance deserved better success. It is difficult to see why the tedious voyage by the Cape of Good Hope of 13,700 miles, as traversed by the Enterprise steamer, should be preferred to the one we are treating of, which is not one half the distance.

Another official document from Bombay will shew the importance

attached to quick communication with England on the west side of India. This notice applies to the conveyance of letters by the Hugh Lindsay, in the voyages, already noticed, by steam packets through the Red Sea.

"Government Notification.—The overland postage to England chargeable at the Bombay Post Office on all letters and packets sent by the steamers is as follows: If the letter or packet weighs not more than one rupee, four rupees; if it weighs more than one rupee, but not more than two rupees, eight rupees; and so on in proportion." By this it will be seen that the smallest postage is fixed at 7*s. sterling*.

The Honourable East India Government have most liberally agreed to permit their officers, who proceed to Egypt on account of ill health, to retain their allowances, as they at present do if they proceed to the Cape of Good Hope, or to places eastward of it. This arrangement will, in all probability, be most beneficial to numbers; and will preclude the necessity that now exists of persons leaving India on account of illness and debility, bound to Europe or elsewhere, running nearer the equator, into warm weather before a colder climate can be obtained. A voyage of one fortnight in the direction of Egypt will cause the thermometer to fall to 70°, and will soon introduce the invalid to the fine climate of Upper Egypt, or to the Mediterranean and Europe, by which arrangement many lives would no doubt be saved.

A portion of the letters that pass between India and England are addressed to soldiers, and consequently, by Act of Parliament, only liable to a small postage; such are supposed to be included in the specified numbers. On the other hand, the reduced rate of carriage this plan admits of, above what has been voluntarily offered for postage throughout India, is likely to create a large increase of correspondence, and the regular intervals between the periods of arrival would not fail greatly to extend the circulation of periodicals and newspapers. With these conflicting arguments it may be allowed to fix as a minimum.

The probable number of letters to pass between England and the Bengal	120,000
Presidency at	100,000
Between England and Madras	80,000
Or annually to pass between England and India	<u>300,000</u>

Newspapers between England and India, at least 600 daily, at a postage of 1 <i>s. each</i>	£10,000
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Periodicals, law papers, samples, &c. by weight, and double letters, including bills, &c. would amount to at least £30,000 at the Three Presidencies. Letters to Ceylon, and to other places in the Indian Seas, by this channel, would be very considerable, but are not estimated here. It is averaged that there will be eight passengers each trip, and that £50 would be a fair charge for the voyage from Bombay to Egypt. This would give an annual receipt of £9600, of which one half might go for messing, and one half towards defraying the expenses of the vessel. An inland postage in India to cover the expense of the *dak* establishment in that country would be very trifling.*

The following is a recapitulation of what has been determined in these calculations.

RECEIPTS.	EXPENDITURE.
300,000 letters at a postage of 3s. each, being one half the sum voluntarily offered at the Three Presidencies.....	Establishment of Steam Packets for Mediterranean service fixed at £5,974 12
£45,000	Expenses in Egypt 1000 0
Newspapers for India 10,000	Steam establishment between Egypt and India, including fuel and every expense for three vessels 30,340 0
Periodical Law Papers, Bills of Exchange, &c. for ditto..... 30,000	
Passage Money as above 4,800	
Total receipt..... £89,800	
Deduct expenditure.. 37,314	
Balance in favor of the project .. £52,486	Total .. £37,314 12

* The following memoranda will illustrate the above estimates.

Europeans residing in India, according to the East India Directory.

	Bengal	Madras	Bombay
Honourable Company's Civil Servants	490	210	150
" Military ditto	2800	2000	1100
" Marine Board and Navy	150	—	130
	3440	2210	1380
			2210
			3440
Total in India	7030		
To which are to be added Officers of Supreme Court of Judicature ..	200		
" Ditto in 24 of H. M. Regiments in India	870		
" Ditto H. M. Navy and Marines	100		
Also there are of Bankers, Merchants, Agents, Clerks, Missionaries, Indigo Planters, &c. not in the service, about	1900		
	10,100		

If an average of fifteen letters annually be received by each of the above individuals, and the like number despatched, the numbers in the estimate will be fully borne out, and also

Besides this enormous profit of £52,000 that is likely immediately to arise from giving effect to the plan, it must be remembered that four fine steamers will be added to the service of our government; employment also will be given to a large portion of the Indian navy, whose expense would by this establishment be reduced nearly £10,000. It will be naturally asked why a scheme so feasible, and apparently so profitable, has not ere this been brought into operation; and what are the objections? Apathy, that governs Eastern habits, is a decided enemy to locomotion. The winds in the Red Sea have their horrors, and the plagues of Egypt are arrayed to stay the undertaking. The gentleman whose treatise on steam navigation in India has been so often quoted, dwells on the importance of introducing it in that country,—“in a political as well as in a commercial point of view.” He makes the following remark. “To Europe alone can we look for that concentrated skill, which, by the rapid march of invention, shall perfect the machinery we require; improvements must necessarily be slow, which are wholly dependent upon the local talents and resources of India.”* It will be seen, by reference to this and other Journals, that the Red Sea offers no decided obstacle to navigators at any season of the year. The periodical winds which prevail there are occasionally boisterous, but are less likely to affect the average rate of a steamer than weather encountered by Mediterranean packets. During three months the narrow Sea of Suez is to sailing vessels rendered difficult to navigate, in consequence of strong north winds.† At an unfavourable period, packets would, if necessary, be landed at Cosseir, from whence dromedaries would pass with them to Alexandria in eight days, or about the same time the post would take to proceed by Suez. Fine weather, and calm or light winds that prevail in the Gulf of Arabia and the

the larger number according to the official return, when the following is taken into account; viz. the correspondence of upwards of 100 banking and agency houses, and the letters of the Governor-General, Commanders-in-Chief, and public departments; nor are double letters estimated for, which would no doubt exist to a large extent. There are about 250 corps, and as many public departments, agency houses, &c. that would take at least one daily paper each.

* Mr. G. A. Prinsep.

† Horsburgh, whose Directory is authority for navigators of the Red Sea, says, “It is almost impossible to beat up against the northerly winds to Suez, in June, July, and August.” This remark applies to sailing vessels, and is reasonable when the narrow sea and shoals are considered.

Red Sea, are often spoken of as causing long passages. When the monsoon is at its height, European vessels never hesitate to undertake the voyage between Egypt and India. Should it be thought that the vessels named for this navigation have not sufficient tonnage, and are wanting in power, the objection is removed by substituting larger vessels. The power there exists of performing a much longer voyage by steamers than is here pointed out, will be made evident by the following comparison. A steam packet of 300 tons, with two 50-horse engines, will only be able to carry 180 tons of coals, or about 15 days' consumption, retaining about 60 tons space for stores and accommodation. A steam packet of 800 tons, with two 100-horse engines, will consume 390 tons of coals in the same time, and have upwards of 200 tons spare room, exclusive of 180 tons allowed for machinery. In prosecuting this voyage a great inconvenience will be felt by individuals being detained in quarantine, but it cannot affect the regularity of the Post Office establishment, as letters are always passed after a trifling delay in the process of fumigation. It has been remarked in another part of this work, where it has been fully discussed, that the plague has of late years been seldom known in Egypt, and is likely to be totally expelled from the soil, in consequence of measures taken by the government. Should it happen that passengers arrive in the country when the plague is there, it would be in their power to escape it by taking certain precautions which Europeans practice to avoid contagion. At present there is a trifling postage on Indian letters; they are generally forwarded through counting-houses, and go in the ship's letter-bag. It must be evident that by adopting this project a large number of Indian letters will pay inland postage and pass through the London Post Office that do not at present; a considerable benefit, which has not been noticed, might also be expected to arise from intercourse and postage with Egypt, and from passengers between Alexandria and Europe; in addition to which, half the profit arising from the project might be placed to the credit of the Home Government as an offset for free carriage of the mails from England by the Malta steam packet, and as an equivalent for the passage of letters between London and Falmouth. From these various sources of profit the probable advantage to the Home Post Office would, at the beginning be between thirty and forty thousand pounds. The Indian Government would also derive a large increase of revenue, independent of the valuable acquisition to their service from the introduction of three efficient steam vessels.

AN ENQUIRY INTO AN OVERLAND ROUTE,
AS APPLICABLE TO INDIVIDUAL ACCOMMODATION, AND FOR STEAM PASSAGE VESSELS.

THE next consideration is the advantage of steam vessels as regards individual accommodation, by the route already described. There are many reasons for proposing that the packet communication should from its importance be distinct, and take precedence of passage vessels; the latter, by causing too sudden an influx of strangers into Egypt, might create jealousy and distrust in a country where ignorance and religious prejudice are deeply rooted and not to be immediately removed. We have estimated that eight passengers would proceed monthly by the packets; these would very soon establish confidence, and open the road to a more general intercourse. The authorities throughout the dominions of the Pacha of Egypt know the friendly feelings of their sovereign towards strangers, and are found to act on all occasions in conformity to it. The Arab population also evince a readiness to co-operate for their own advantage. Passengers who go in the packets by this route would almost invariably land or embark at Cosseir. Proceeding thence to Thebes, and down the Nile to Alexandria, or the contrary, would fully occupy the intervening time till the packet of the following month is in readiness to depart.

At favourable seasons there would, probably, be passengers requiring further accommodation to and from Egypt than the packets are intended to provide for. This could be effected by shortening the length of the stages, and establishing dépôts at the Islands of Socatra and Camaran; by which arrangement little more than 100 tons of coal at one time would ever be required for a voyage. Socatra is the nearest land to Bombay in the direction of the Straits of Bab-el-Mandel, the other station nearly divides the distance from Socatra to Cosseir. (See the Outline Map.) The stages would in such a case be from Bombay to Socatra 1137 miles, to Camaran 835, and to Cosseir 795 miles. At the moderate rate of six miles per hour this voyage would be performed in twenty-four days, allowing two days for delay at each station. Should it be found advisable to forward the mail by the same conveyance, it could be sent on dromedaries from Cosseir 350 miles to Alexandria in a week.

From Cosseir, a journey of four or five days brings the traveller to

Thebes, on the banks of the Nile, where four days at least ought to be given to exploring the remains.* From Thebes the journey to Cairo is prosecuted on the river, and many places of interest lie in the route. A few only can be visited in the time allowed, which could not exceed two or three days. The voyage from Thebes to Cairo, with "seeing the lions," will altogether have occupied about fifteen days. Cairo and its environs afford amusement for at least four or five days; the journey from thence to Alexandria averages four days. The remaining five or six days devoted to sojourning will be fully occupied viewing the remains, and exploring the environs, of the ancient capital of the Ptolemies, and once denominated "the pride of the East."† At Alexandria vessels will be found proceeding to the different parts of the Mediterranean. Malta is selected by travellers as the favourite port in Europe, on account of its well regulated quarantine establishment; and on this route it would be the more desirable as being the rendezvous of the packets. In proceeding from Europe towards India, more time must be allowed for the navigation of the Nile; and as this must depend on the season, it is difficult to fix any period as a general rule. To proceed from Alexandria to Cairo may be taken at five days; from thence to Thebes the voyage generally occupies about sixteen days, and to cross the Desert to Cosseir five days more. This estimate, if correct, will give the traveller ten or twelve days to explore the country through which he passes. The means of performing the journey in the time here quoted has been considered in the Journal, as also its probable expense, duration, &c.

A double voyage for a steamer between Bombay and Suez, including fuel, to cover all expenses, has already been estimated at a cost of about £2,500. The same sum would defray the charges of the double

* For particulars of this, journey and the mode of proceeding from Cosseir to Alexandria, the reader is referred to my Journal.

† A delay of six days for the mail to cross the Isthmus, added to the month that would intervene from the arrivals of one packet to that of another, would afford about five weeks for the excursion between Alexandria and Cosseir.

voyage here proposed. In this voyage there would be forty-five hours coals saved by not proceeding so high up the Red Sea as to Suez, and another saving of expense in consequence of coals being furnished cheaper at Socatra than at Aden. Those advantages are about equivalent to the extra price attending the transportation of coals to Camaran above those at Aden, and the expense of supplies at Cosseir above that at Suez. The Island of Socatra* has harbours, water, and inhabitants, and carries on some trade. (See Journal, and View of Socatra.) The Island of Camaran is a field of coral sixteen or twenty feet above the sea. There is a secure harbour easy of access, where any sized vessel may lie close to the shore. A little fort overlooks about one hundred houses inhabited by Arabs, who seem to possess a considerable spirit of industry. Water is to be had close to the village. The island lies about twenty miles off shore opposite the town of Loheia. (See Journal.) Camaran is well situated for trade with the inhabitants of Central Arabia, and with the people of great part of Africa. Camaran, like Socatra, has a nominal sovereign, and is under the chief of Saana. Islands have no trifling advantage as dépôts, where the predatory disposition of the inhabitants is so remarkable, as it has been for centuries hereditary, and not likely to change.

There can be little doubt of the success of passage vessels, particularly during the months of November, December, and January, when persons would be desirous to proceed to and from India, this being the most favorable season for exploring the antiquities of Egypt. Supposing

* "Bullocks, goats, sheep, and fish, may be procured here at reasonable prices, and good water; this runs from the mountains into a sandy valley among date-trees, about a quarter of a mile from the town. The natives are poor, and have been, in general, hospitable to strangers. Rice is an essential article to barter with them for refreshments. Good aloes may be procured here, and at times dragon's blood in small quantities; grapes, water-melons, pumpkins, oranges, and plantains, may be got in March and April, and plenty of dates in June. There are other places where ships might anchor besides those already mentioned, particularly at a bay at the north-west end of the island, where there is a small rivulet."—*Horsburgh's India Directory, 1826.*

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that twenty-four persons perform the voyage each way through the Red Sea, at a cost of £50, the whole expenses of the steamer, including fuel, will be paid off. If packets are sent during these months by this conveyance, it is highly probable that the time of communication between Cosseir and Alexandria, (across three hundred and fifty miles of country,) by means

of dromedaries, may be reduced to a week. Passengers could not proceed by such conveyance, but packets will arrive only a day or two later than by the regular route to Suez. In regard to the passage vessels, it will be seen that much must remain to be regulated by experience, which practical operation will very soon furnish. As to the practicability of

their being established fully to accomplish the above object, a personal inspection of all the places named in the route, and a due attention to their situations, &c., leaves not the slightest doubt. Should the Post Office favour this plan of combining public and private accommodation, it will, in all probability, lead to the following result.

ADVANTAGE OF COMBINING THE POST OFFICE AND PASSAGE CONVEYANCES,

THEREBY TO INTRODUCE

MORE FORCE AND EFFICIENCY THROUGHOUT THE WHOLE ESTABLISHMENT, AND REDUCE THE TIME OF TRANSIT BETWEEN ENGLAND AND INDIA TO ONE MONTH.

A QUESTION arises, whether it may not be desirable at once to combine the passage and packet communication, and establish larger vessels with more power than any that have yet been named. The policy of this point, although apparently desirable, must depend in a great measure on the understanding between the governments of the countries interested, and whether Egypt be yet prepared for the introduction of so extensive an enterprise. That it will eventually take place, there can be but little doubt. The additional receipts arising by this combined plan would enable steam vessels of 600 tons burthen, with engines possessing two hundred horse power, to be established throughout the communication. The average rate of speed for such vessels would not be less than nine miles an hour.* It will appear from data already given, that to perform the voyage from Bombay to Aden, and from thence to Suez, at the above speed, the steam will be in action 330 hours. Proceeding likewise at the same rate of transit from Egypt to Malta, to Gibraltar, and to Falmouth, about 350 hours would be required to perform the second portion of the voyage. If one packet were stationed mid-way in each line of route, say at Aden and at Gibraltar, to get up their steam on the appearance of the approaching steamers, no delay

would impede the progress of the mail, and the packets that arrived to relieve those in the middle station would be ready to start in the same way with the return mail. A rail-road, or other means of quick transportation, might connect these lines of packets where the Isthmus of Suez is narrowest, or across the seventy miles of desert that separate the Pelusium mouth of the Nile on the Mediterranean shore from the Sea of Suez. The passage between the seas by such an operation might be achieved in a day. By the above it will be found that the communication between England and our territories in India would only require twenty-eight days to perform. It must be evident, that it is not only in the power of science at the present age to bring India within one month's travel of this country, but it is very probable that enterprise, so transcendent with British merchants, will effect it.

A few observations are offered to illustrate the project so well worthy of mature consideration. The vessels proposed for the service are of six hundred tons burthen; they will consume* about $1\frac{1}{2}$ ton of coal per hour, or 27 tons in twenty-four hours. No greater distance than 1700 miles will occur throughout the route, and to perform that distance at the rate named would take 190 hours, or cause, at the utmost, 220

tons of fuel to be consumed. The engines, &c. of the specified class of steamers would weigh 180 tons. It will therefore be found that 200 tons of the vessel are still disposable for accommodation. The expense of such a line of packets, as is here adverted to, including the additional consumption of fuel above those already proposed for the Post Office service, would be about £1000 per month for the whole establishment. This mode of voyaging would, no doubt, cause Egypt to become a favourite stage for the traveller to and from India; numbers would thus rescue from the monotony of sea voyages five or six months of precious furlough; and if a third month be given to the double journey, an acquaintance could be made with a country decidedly the most interesting in the world to the traveller and antiquarian. It has been presumed that the steamers we are treating of would combine the duties of packets and of passage vessels. The extra expense of the establishment between England and India has been said to be £1000 per month, and this would be covered by an average monthly increase of ten passengers each voyage, providing half their passage money already named for this mode of travelling, or £50 from each, is attributed to defray the charge of the vessels. The additional correspondence and impetus to trade that would arise from such an enterprise as this being successfully established, are altogether incalculable.

* The United Kingdom steamer, of 200-horse power engines, goes between the Leith Roads and the River Thames, (Greenwich.) She performs the double voyage, or 1000 miles, on an average, in 104 hours, being at the rate of $9\frac{1}{2}$ miles per hour.

* According to Admiralty Report, 26 tons in twenty-four hours. The United Kingdom, 200-horse power engines, in performing the 1000 miles just mentioned, expends 110 tons of coal, or little more than a ton per hour.

WINDS IN THE RED SEA,

AND THE MEANS OF PROCEEDING ON THIS ROUTE BY SAILING VESSELS.

THE voyage between Egypt and India is encountered at all seasons by European sailing vessels, but it is attended with such delay, when the winds are unfavourable, and through seas where calms or light airs are of such frequent occurrence, that sailing vessels only undertake it in urgent cases. The extent of the Red Sea, from Suez to its mouth, is about 1200 miles; it widens from either end, and has an average breadth of about two degrees. If half a degree be taken off from either side of the sea, in consequence of the beds of coral and islands, there will be a great canal, twenty degrees in length, with a clear mid-channel passage sixty miles broad. The periodical breezes that prevail in the centre of the sea are seldom felt within the reefs and islands that form lines parallel with the coast, in consequence of evaporation that takes place over the surface of the coral and deadens the wind. The inner channel is therefore left to be influenced by the phenomenon of the land and sea breeze, known throughout the tropics. During each year in the northern latitudes of the Red Sea, and at Suez, north winds prevail for at least nine months, and at the opposite end of the sea south winds are found to prevail for nearly the same length of time, whilst the winds between these extremities, or from 18° to 20° of latitude, are light and variable. By means of the diurnal winds above mentioned, or those called land and sea breezes, native vessels perform their voyages creeping along the shore, and anchoring each night. The inner channel, where these breezes are found, owing to numerous shoals, can never be rendered available for general navigation.

At its embouchure the Red Sea narrows to six leagues; its course is turned from south to east by hills projecting from the African chain of mountains, and terminating at Cape Guardafui. The opposite side of the channel is confined by a range of mountains which extends to the south point of the peninsula of Arabia. An island lying nearer the Arabian than the African side, divides the outlet of the Red Sea into two streams, called the Straits of Bab-el-Mandel, both of which are navigable. Beyond this passage, as far as the Island of Socatra, is the Gulph of Aden, with the town of that name, situate at the southern extremity of Arabia. Twenty miles from the Straits, and between Aden

and Bombay, the sea is influenced by the regular south-west and north-east monsoons known throughout the Indian Ocean. Currents in the Red Sea depend chiefly on the duration and strength of winds, and are not in mid-channel at any time of serious consideration.

The means afforded for prosecuting the voyage to and from India, independent of aid from steam vessels, will be estimated; and here the traveller will do well to look with due attention into the many difficulties and delays he is likely to meet with. Without such precaution, a voyage commenced with promised delight, and hoped-for dispatch, must often be attended with vexatious disappointment, and obstacles would often be encountered when furthest from any possible remedy. Travellers have been known to proceed from Europe as far as Cairo on their route towards India and to return, not being able to advance through the Red Sea. The voyage from the east towards Europe originates in the regions of periodical winds, or monsoons, and is not attended with the same doubtful results as that from Europe to India. These remarks regarding navigation in the Red Sea apply more particularly to native conveyances; European vessels so seldom frequent those parts, that no dependence can be placed by travellers on meeting them.

The winds that blow in the Red Sea, although periodical, are influenced, as has been stated, by the position of the mountains which border on the Gulph, and are at all times liable to variations, as are seasons in every part of the globe. In the north of the sea the north wind prevails for a great portion of the year, beginning in February, and terminating in November; during the first portion of that period it is variable, and inclining to the west. It is found to blow steadier and with its greatest strength in the middle period, or during June, July, and August, after which it moderates, and inclines to the east until November. Between November and February, south winds extend to the upper latitudes of the Red Sea. From the above it would appear that the voyage from Suez to Bab-el-Mandel may be performed during nine months in each year, but it will be found that opposite or southerly winds prevail in the south of the Red Sea from September to the end of May. Northerly

winds prevail for the remainder of the year, or from May to September, the whole extent of the sea, and this is, no doubt, caused by the Etesian or north-west wind, that blows at the same time in the Mediterranean. In this latter period, therefore, the wind admits of vessels sailing from Suez to the Straits of Bab-el-Mandel. At the bottom of the Red Sea the ranges of mountain on either side directs the strong winds that blow through the Straits. The north wind which prevails from May to September meets resistance from the African chain of mountains that bounds the south of the Gulf, and circles towards Cape Guardafui; while on the opposite side of the sea it is confined by the south end of the Arabian chain. The wind, therefore, is forced to take an easterly direction, and continues to blow to that quarter till met and governed by the south-west monsoon which it meets near Socatra. The north-east monsoon that blows in the Indian Ocean, and outside the Sea of Suez, between September and May, is also contracted and strengthened by the land adverted to. On approaching the mouth of the Red Sea, it blows nearly into the Straits, and as it meets resistance on the African side, it is turned to the north, causing southerly winds to prevail in the bottom of the Red Sea, in opposition, as has been already stated, to prevailing north winds at the time blowing from Suez. The formation of the mountains will also account for the strong winds that at all times blow through the Straits of Bab-el-Mandel.

If the voyager is proceeding to India by native conveyances, a further obstruction independent of contrary winds will, in all probability, arise at Mocha. The west wind that begins to blow in May, and that has been said to offer fair from the Red Sea to India, is of such strength until the middle of July, that it prevents native trading vessels from putting to sea. This arrangement is seldom departed from, and is reasonable when the rig and make of the buggalow and the inexperience of Arab navigators are considered. Persons who arrive at Mocha *en route* to India, between May and July, may, however, on emergency, procure buggalows of eighty or one hundred tons to proceed on the voyage to India. Vessels, such as the above, take advantage of changes or lulls of wind, and run along the Arabian coast to Muscat, which they reach in ten or twelve

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days, and from whence frequent opportunities offer for Bombay. The vessel will most probably have her deck continually wet, and no cooking or comfort can be expected on board. Previous to the fair wind for proceeding to India in May, or between September and that month, the north-east monsoon is directly contrary for vessels sailing from the Red Sea. There are, however, breaks in the monsoon during the period named, and more particularly towards the latter part, when the wind moderates for two or three days at a time, and varies to the north or west. These changes are taken advantage of by vessels of the size previously mentioned, and if Aden, the first port outside the Red Sea, can be reached, the voyage to Muscat will be made in six weeks or two months. The natives are careful never to venture too far to prevent them anchoring, in case of a change of wind or weather, and by attending closely to these rules they at length attain their desired goal. At Muscat vessels frequently touch on the voyage from Bussorah and Bagdad to Bombay, and here there is no great danger of a long detention. The traveller on his arrival at Mocha early in the year will therefore be much disappointed to find, that, except by submitting to much inconvenience and expense to proceed as above described, the time for obtaining a passage to India is limited to the short period from the middle of July to the same time in September. During this season of egress to the Indian Ocean, traders are continually departing from Mocha and ports at the bottom of the Red Sea, and they are enabled to make the voyage to Bombay in less than a month.

In remarking on the home voyage by these seas, it will be seen, from what has already been said of the prevailing winds in the regions between Bombay and Suez, that vessels may sail from the former place to Mocha in less than thirty days during any period between September and May. A north-east wind would prevail between India and the Straits of Bab-el-Mandel, and a south wind would be found in the bottom of the Red Sea. In the high latitudes of the Red Sea north winds have been stated to prevail from March to November; the months of November, December, and January, will therefore be found favourable for the voyage throughout from Bombay to Suez. Vessels leaving Bombay previous to September, and before the setting in of the north-east monsoon, would encounter a foul wind, and in all probability be driven to the south of Socatra. It is probable such vessels would be passed by others leaving Bombay in October with the north-east wind. The most favourable season for travellers arriving at Cosseir is during the months of Novem-

ber or December, if intending to explore Upper Egypt, and in those months or in January if proceeding direct to Europe. The voyage to Suez or Cosseir, by keeping the sea, will be performed from Bombay at this season in five or six weeks; but if the traveller trust to native conveyances, and their mode of navigating, he must expect much uncertainty from causes already assigned, and months will be wasted, where weeks ought to suffice. No entreaty will induce the native captains to cross the Red Sea, until they reach a port high enough on the Arabian side to ensure them making the opposite coast above Cosseir. I was twenty-six days getting from Jiddah to Cosseir, in what was thought to be a fine vessel, with a good commander. He obstinately followed the Arabian coast until he got as high as Moila, after which he crossed, and coasted down the opposite side to Cosseir. Eastern nations place little value on time, and make no allowance for an opposite feeling in others; no expostulations will induce them to depart from custom.

The plague season, which begins at the end of February, will be a consideration to many travellers, and although the pestilence occasionally is not known in the country for many years together, it will be some time before Europeans will be able to divest themselves of prejudice so far as to visit Egypt in March, April, and May, without some reluctance. From the causes assigned in different parts of the investigation it will be seen, that in proceeding from England to India by sailing vessels by this route, the most favourable period to arrive in Egypt would be between May and July, or after the termination of the plague season, and in time to arrive at Mocha for the traders going to India. If travellers reach Egypt previous to the plague season, and wish to avoid the chance of its appearance, they may proceed by the Nile to Upper Egypt, where there is comparatively no danger, as the infection even when it does reach the country lower down seldom extends higher than the latitude of Siout. Travellers may in this case amuse themselves with exploring the antiquities on the banks of the Nile, and embark in the proper season at Cosseir. By the above it will be evident that the voyage to or from India by means of sailing vessels must at all times be most precarious, and never likely to be of less duration than the passage round the Cape of Good Hope. The uncertainty and trouble attending the journey by the route has caused but little intercourse to take place, while the expenses of interpreters and other exigencies that must arise in travelling through an unfrequented country, has also prevented persons proceeding by it. If European sailing vessels were procurable at Bombay and in the Red

Sea, and were to start at the most favourable seasons, there are a few months in the year when travellers might expect to pass between India and Egypt in a month or six weeks, and the voyage from England to the latter country, or the contrary, may possibly be made in the same time. When European vessels navigate these seas, they pay no attention to winds as offering any decided obstacle, and always keep the middle channel. Their voyages depend altogether on the season in which they are made. When the winds admit of a direct run from Bombay to Suez, or the contrary, it is made in four or five weeks, at other times it will require as many months. In January 1830, the Honourable Company's vessel the Thetis left Jiddah on her return to Bombay on the 20th: she was fourteen days getting to Mocha, and six weeks from Mocha to Bombay. In June, Mrs. Elwood mentions that the George Cruttenden, an English merchant ship, was fourteen days going from Jiddah to Mocha, and only the same time in going from Mocha to Bombay. Colonel Fitzclarence, who proceeded with despatches from Bombay in a cruiser of the Honourable Company's in the month of February, was near fifty days in reaching Cosseir, in defiance of all endeavours to shorten the voyage; and we find by Mrs. Lushington's Journal, that in November she proceeded in a cruiser of the Honourable Company's, and made Mocha fifteen days from Bombay, and was three weeks longer in getting to Cosseir.

These few examples will shew the precarious nature of this navigation, and how little it is to be depended on even in ships that keep the sea, and are scientifically managed. It is almost impossible to give any estimate of the time or expense of proceeding by the same route by native vessels; they will anchor at night and keep to the channel within the shoals; in favourable weather they may average twelve or twenty days in the voyage between Mocha and Jiddah, and fifteen or twenty-five days from the latter place to Cosseir. The passage down the sea will be made in less time, and there are parts of the coast between Jiddah and Mocha free of shoals, where vessels proceed at night. The natives have no fixed price for their services, and demand in proportion to the traveller's means, or the urgency of his affairs, both of which they will endeavour to divine. Instead of taking a vessel throughout the passage, for which an exorbitant price will be demanded, the traveller would do better to make his bargain to Jiddah, from thence to Loheia, or Mocha, and then to Bombay. The demand will be from 150 to 300 Spanish dollars for each stage, or from £90 to £180 for the whole voyage, exclusive of messing. Vessels,

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such as are above alluded to, afford indifferent accommodation to three or four persons.

We have endeavoured fairly to point out to the traveller the obstacles that exist in a communication by sailing vessels through this route to India; the impossibility of its application, even for a season, to general purposes where regularity is an object, will be evident, and tends to shew an additional motive for the introduction of steamers.

As a further argument in favor of the latter project, the navigation of the Red Sea, hitherto but imperfectly known, is now rendered safe, in consequence of an accurate survey having been made by the Indian navy; the centre channel, which is the course for steam vessels, is found free of danger. It is most satisfactory to find that our estimate of the time required to make the passage between Egypt and India is fully borne out by the excellent authority of Sir John Malcolm, whose opinions are founded on the observations and experience of practical men, and after having performed, himself, a double voyage through the Red Sea. The following remarks are in the work already alluded to, as containing his views on the subject.—“Despatches may be carried from Bombay to Alexandria in twenty-four days for nine months in the year; during the other three months the progress of the steamers will be impeded by the violence of the northerly winds.” The passage up the Red Sea during the three unfavourable months has already been discussed, and every expected inconvenience will be obviated by the introduction of powerful steamers, such as have been proposed in this project, instead of others of only 270 tons contemplated in the above remark. If, however, in the narrow Sea of Suez, the north wind for the above period should be found materially to delay the packets, they will land their mails at the port of Cosseir, from whence it has been shewn they may be forwarded overland to Alexandria, to reach that place in the specified time. Sir John Malcolm did not visit Socatra, and would not, therefore, appear to have been satisfied as to the resources of that island. In relation to a vessel like the Hugh Lindsay, adapted to carry only six days' coal, he necessarily deemed Aden, with all its advantages, too long a stage from Bombay. In the portion of the voyage without the Red Sea, the only weather likely to affect the regular progress of the packets would be met during the months of June and July, or when the south-west monsoon blows with considerable force

and in squalls; but even during those months European sailing vessels, although opposed by it, perform their voyage without difficulty. Our statement regarding the facility of transport through Egypt is borne out by Sir John Malcolm, who says, “The Pacha of Egypt neither is nor will be inimical to this line of communication; on the contrary, he will rejoice in this and every opportunity of meeting the wishes of a country on whose friendship and good feeling he has become from his condition so very dependent.”

The remaining point that calls for observation is the duration of quarantine. It has been remarked in the pages of the Journal, that for many years together the epidemic plague, which is the alleged cause of quarantine, has not visited Egypt; and it has been given as the opinion of European medical men, that it may be totally removed from that country. Such will therefore, in all probability, be the result of the introduction of professional science and other salutary measures now in progress in Egypt. The existing quarantine regulations are of very questionable utility, and in some places they are maintained from various interested motives. Some alleviation in them was attempted at Malta, but it was immediately frustrated by other ports of the Mediterranean prohibiting communication with the relaxing place. The quarantine is no where more strictly enforced than at Naples; but there, as at Malta, where the plague broke out twenty years ago, it was introduced by smuggling. The duration of confinement is in a great measure arbitrary, and may be sixteen days or six weeks, according to the bill of health brought from the last port; the former is the period of probation for persons arriving at Malta from Egypt in men-of-war. Passengers, however, would not be exposed to quarantine restrictions if they proceeded direct to England.

The Red Sea is not the only route by which it is hoped to establish a steam communication between India and Europe. The line of the Euphrates river and the Persian Gulf has been recommended. No steam vessel has yet attempted a voyage in this direction, and we are not sufficiently acquainted with the route fairly to discuss its merits. A reference to the Map, however, will shew that a change of vessels must take place to ascend the Euphrates, and the uncertainty of river navigation is also an objection where regularity is required, both as regards public and pri-

vate convenience, for it has been shewn, that to ensure economy and dispatch, the steamers' movements in the Mediterranean and Indian Seas must closely conform to each other. If, after a survey of the Euphrates, the communication to India by the Persian Gulf should appear preferable to that by the Red Sea, a transfer of the packets can be readily made. In the mean time the route by the Red Sea being known to be practicable, its immediate adoption should not be prevented by the possibility of the other becoming so. Apart from the natural obstacles that, on a close investigation, may be found to exist by the way of the Euphrates, the political state of the countries through which the communication must pass, would seem to present insurmountable difficulties. A better opinion on this latter point will be formed after a perusal of the article that follows. We would wish the plan we are advocating to be judged by its true merits and obvious utility; it is here brought forward in a tangible form, and it should not be set aside, unless another, grounded on data equally certain, and likely to have more advantageous results, be submitted for adoption.

In the foregoing pages, (including those of the Journal), our aim has been fairly to discuss every circumstance in any way connected with the more immediate object of this work. It must have been remarked in perusing them, that several obstacles in the line of route heretofore deserving of serious consideration, have been, as it were, simultaneously overcome, and that Egypt now offers the means not only to advance the commercial interests of Great Britain, but to maintain her political ascendancy in the Eastern World. The succeeding article will shew that the capacity to assume offensive operations in the Persian Gulf and in the Indus River, is absolutely necessary for the future protection of India; and more particularly if, as is currently reported, Bagdad be ceded to Persia, or, in other words, should the Tigris River be rendered subservient to the designs of Russia. It would be rash to assert that the threatening attitude and rapid advances of Russia towards the East do not demand every attention on the part of Great Britain, to prevent a further approximation of its colossal power to the country eastward of the Indus, which a learned historian informs us has never been invaded since the days of Alexander without being conquered.

NOTE TO CONCLUDE "STEAM NAVIGATION."

In the evidence taken before a Select Committee of the House of Commons, on the affairs of the East India Company, and made public since the preceding pages were written, there are a few items which call for particular remark. It was stated to the Committee as a strong objection to the use of steam navigation in the Red Sea, that coals would there cost seven pounds per ton. In accounting for this very high estimate it was presumed that the coals had been first shipped at London for India, carried out to Bombay, and from thence to the Red Sea. The estimated cost at London was set down at 30s. per ton, and the freight to Bombay at 40s. per ton, which would raise their cost there to 70s., and this was to be doubled by their after-transport to the ports in the Red Sea. In order to shew the extravagance of this estimate when contrasted with the actual price of coal in the Bombay market, we have only to refer to the columns of the Asiatic Register. In the number of that journal for the last quarter, of 1832, the average price of coal in the Bombay market was as low, during the three months mentioned, as 25s. per ton; and in looking farther back, it will be found that the average price during some years, did not exceed 35s. per ton.

Even on making an application to respectable merchants in the city of London, to name a price at which they would deliver coals at

Bombay, they did not exceed in their offers 40s. per ton. I subjoin a note on that head, received from one of these merchants.

"London, February 23, 1833.

"SIR,

"We would contract to supply coal of the first quality suitable to steamers to any extent, deliverable at Bombay, at 40s per ton.

"J. RITCHIE,

"Of the Firm of RITCHIE, STEUART, & Co. Bombay."

Captain Head.

Now, in my opinion, as I have previously observed, coals can be furnished much cheaper to steamers intended to navigate the Red Sea, by carrying the coals direct to Aden, an Arabian port, situated immediately *without* the straits of Bab-el-Mandel, than *via* Bombay. Thus, should vessels leaving Great Britain for Bombay, take out coals from Liverpool or Glasgow, where coals are cheap—about 15s. per ton in the former, and 12s in the latter—and should these vessels take the *inner passage*, touching in the first place at Aden to discharge the coals at the floating magazine to be established there, the

fair cost at Aden of these coals, after making every reasonable allowance for delay, &c. could scarcely ever be higher than 50s. per ton.

The remaining dépôt at Suez, as I have already shewn in another place, could be supplied from Alexandria at a raté not exceeding 60s. per ton. The probable price at Alexandria itself, which I have stated in this work, is 35s. per ton; and this comes very close to the following estimate that I since received from another merchant of London.

"Water Lane, February 23, 1833.

"SIR,

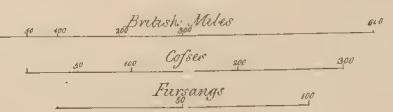
"We should be happy to supply coal of the first quality, suitable to steamers, delivered at Alexandria, at 34s. per ton. We are quite sure that it would not upon any occasion be necessary to exceed this price beyond one or two shillings per ton. This price includes the duty of 3s. 4d. per ton, which we presume it would not be necessary to charge if the coals were sent out on account of the British government.

"G. L. JACKSON & SONS."

Captain Head.

T A R: T A R X°

Sketch to illustrate the
"Defence of British India from Russian Invasion."





DEFENCE OF BRITISH INDIA FROM RUSSIAN INVASION.

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THUS far attention has been given to the proposed measure of steam navigation as one of public advantage and of private accommodation in facilitating communication between this country and the East. Allusion has also been made to other benefits that no doubt would arise from its adoption. The philanthropist will perceive that the germs of industry, and consequent civilization, would be extended to nations at present almost unknown to the European world; the merchant may expect new marts to be opened for the barter of produce; the Christian will see that a road is traced out through which religion may approach to countries long excluded from its blessings. To dilate on these various points would far exceed the prescribed limits of this work, nor can it be expected from one whose professional pursuits so little qualify him for such a vein of speculation. It would, however, be neglecting the object which these pages are advocating, if some allusion were not made to the great importance to be derived from steam vessels as an auxiliary either in maritime or territorial defence, should an European enemy attempt to approach the borders of Hindoostan. A political crisis may arise sooner than is expected, when the strength of western nations will be put forth, and a struggle may take place in which each vulnerable portion of the British empire will become a point of assault. It therefore behoves Great Britain to take a survey of her extended dominions, and to enquire which part of their limits is most accessible to attack; and in what quarter an enemy could strike a blow most likely to affect the prosperity of the nation. There can be no hesitation in answering that Russia will endeavour to close with England in that region, where success will depend on the developement of her great military prowess, and where the co-operation of a maritime force is least required. Can there be a fairer field for the display of her formidable legions, or one where a richer reward may be anticipated, than the wide plains of Hindoostan? An invasion of British India is becoming the every-day topic for remark in foreign journals, as it is in our own. It cannot but promote all the effect of assumed importance in the power that can even threaten so valuable a part of our empire. The progress of the late war between Russia and Persia not only demonstrated the strength and resources of the northern autocrat, but its result exposed the weak and compromising character of Asiatics; and evidenced the

alacrity with which the inhabitants of provinces contiguous to Russia will join in any expedition that promises a fair reward.

In considering the question before us, it will be necessary to bear in mind, throughout the enquiry, that an invading army, of however crude and opposite materials it may be composed, will take the field with great odds in its favour, from the circumstance of its object being defined, and the duty of every man being made apparent. Whereas, an army acting on the defensive can hope for no reward even after a hard-earned victory; at the same time that they are liable to the harrassing duty of continually watching the movements of their enemy. If the patriotic feeling which causes men to defend their soil, and feel a hatred towards the invaders, could be imparted to the natives of India, then would the territory of Hindoostan be comparatively safe. But how little is this to be expected in the case we are contemplating, where the people of the country have at the best of times so little perseverance and energy, and where an army that would be collected to defend any frontier must be composed of a variety of nations, differing in language and religion, strangers to the region they are fighting in, and assembled from provinces as little known to each other as are the various states of Europe. We must also consider the inherent desire in kings and in subjects for aggrandisement. Russia, which is now in direct collision with nations that are to be as easily overcome as were those of British India, will, no doubt, pursue her advantage and extend her boundary towards the East, and Great Britain will, in all probability, ere long, have to contest her right of sovereignty over three-fourths of her subjects, included in the population of Hindoostan.

When it is remembered that the colossal power of Russia has attained its present eminence in three half centuries, or since the master-spirit of Peter the Great brought his people to rank with civilized nations, and caused the empire, of which he laid the foundation, to increase in population from sixteen to sixty millions, a moment's reflection will suggest the prudence of speculating with regard to its future progress. At present the disciplined legions of Russia are rated at 900,000, and they have tried their strength with success against most of their neighbours. The nations towards the east and south have felt and admitted the superiority of their discipline, and will hereafter prefer

an amicable alliance to another useless struggle. The territory of Russia has had a proportionable increase with her subjects, and has extended so much in Asia as to leave but a frail barrier between the armed giant of the north, and the commercial Colossus of Hindoostan. A full investigation into the important question of the probable result of an attempt of Russia to approach the Indus, to seize the alluring prize which Western nations have ever aimed at, would demand much more accurate detail than these pages can pretend to. Nor does the object of this discussion require more than an outline, or enough to shew that precautionary measures by the British government would be desirable, and that such may be greatly facilitated by the introduction of steam vessels in our Eastern possessions. A general view will be taken of the different routes by which a Russian force may approach India, and the time that the march by each might occupy. The practicability of a Russian force passing from its own territory to India in one campaign will be particularly dwelt upon.

The widely extended southern frontier of the Russian empire, which in longitude sweeps over nearly one half of the whole globe, will admit of a military force advancing from that territory towards India from four distinct points. Each of these routes involves a variety of detail and expository matter, that greatly limits their consideration here, and obliges the notice to be chiefly confined to the one that is most likely to be adopted. By the most westerly route the line of operations is the longest, and the subjugation of Persia would become necessary. These would demand a second campaign before a Russian army could reach India. The south shores of the Black Sea would be the basis for a first series of movements, and Herat, a city on the eastern boundary of the Persian empire, would be the station whence arrangements for a second campaign would emanate, and from which the invaders would advance towards Hindoostan.

Another mode by which an army may pass from Russia to the Indus is through the establishment of a dépôt, by means of the Volga river, at a station on the south shore of the Caspian Sea. The line of march will be considerably reduced, and a demonstration only towards Persia would be made on the south of the Black Sea. In effecting an invasion by this route, the co-operation of Persia, and not its subju-

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gation, would be necessary, and if that auxiliary be admitted as attainable by Russia, this method of proceeding would seem the most feasible and likely to be attempted. Here the same point on the east frontier of Persia, as in the last advance, would be the basis for a second series of movements to complete the invasion.

The third line of advance from Russia, as we proceed eastward, would be from the east shore of the Caspian Sea across a desert to Khiva, on the Oxus or Amu river, and thence to Balkh, and by a caravan route to the Indus. A fourth route lies still further to the east than the Oxus or Amu river, and would pass through the city of Kohkhand, which communicates by a river with the sea of Aral; it would proceed to Bokhararia, and by Balkh to the Indus. As these routes are more eastward they are found to be shorter, and an advance by the two latter, if attempted, would most probably be executed with rapidity. The success of the enterprise would, however, be more precarious than by the western routes, and might be looked on in the light of a *coup-de-main*.

Each of the four routes above named has had its advocate, and they have all engaged the attention of the government of St. Petersburg. The principal information that can be obtained concerning the two last specified, is from statistical details, furnished by embassies, proceeding from Russia to the cities of Kohkhand, Bokhara, and Khiva, with a view to open a communication with these places, and to find the way towards India, on the invasion of which, by the Oxus or Amu, opinions have been freely circulated in the Russian capital. Before proceeding to discuss the merits of any particular line of operations, a view will be taken of the resources of the two nations that are principally involved in the execution of the enterprize.

The population of the Russian Empire	60,000,000	Of the Persian Empire	
is estimated at		6,000,000 *	
The army of that nation is said to be	900,000	24,000, and	
The revenue of the State when the national debt is deducted is placed at	15,000,000 sterling.	200,000 militia.	

* "Pinkerton, concluding that the population of Persia and Candahar does not exceed that of Asiatic Turkey, computes it at 10,000,000, of which he thinks 4,000,000 may be allowed to Candahar, and 6,000,000 to what he terms Western Persia, or, in other words, to the present kingdom; and this estimate is, probably, not very remote from the

The following remarks will further illustrate the relative strength of these states. "Of the forty sons of the King of Persia there is not one who does not look to the throne; nearly one half of them are governors of towns and provinces, a system which, although it may add to the immediate security of the father, presents a fearful and bloody prospect to his subjects, by enabling each of the princes hereafter to support his pretensions by force of arms; and as he who must eventually ascend the throne must mount it imbrued in the blood of his nine-and-thirty brothers, personal safety, if not ambition, will urge them to the exertion."*

The same unquestionable authority further observes. "It cannot, however, be denied that the Persians would seize with avidity any proposal of this nature,"—(an invasion of British India.) "The love of plunder, the example of Nadir Shah, and the idea which they have formed of the wealth and weakness of our Eastern possessions, would alike stimulate them to the undertaking."

An anecdote from the "Sketches of Persia" will tend to illustrate the character of Eastern nations generally. The author of this work, pointing out to a Cabul nobleman, Calcutta, "the City of Palaces," with its splendid mansions, "all, in short, that could impress him with an idea of the happy results of civilization," asked him what he thought of it. "A wonderful place to plunder," was his reply; "and his eyes glistened as he made it with anticipated enjoyment."

Of the political faith of Persia, another recent traveller remarks:†

truth. It gives about 100 to a square mile; and though some parts may far exceed this, several large tracts of desert are totally uninhabited."

The above remark is from the History of Persia, by Sir John Malcolm, who gives the following account of the Persian army.

The military force of that nation comprises a militia, who provide their own cloathing and arms, the latter usually consists of a matchlock, sabre, and dagger	120,000
The militia has no further discipline than that of obeying their own officers, and neither the men of this class, nor the irregular horse, will submit to be commanded by any but those members of their own body whom they deem their superiors.	
Irregular horse above alluded to	80,000
The regular army, consisting of irregular horse and infantry, with artillery	20,000
To these forces are to be added a body of 3,000 or 4,000 horse, termed the royal guards, composed of Georgian slaves and the sons of the first noblemen of Persia	4,000
Total force of the army and militia	224,000

* Journey through Asia Minor, &c., by Colonel John Macdonald Kinneir.

† Travels of J. B. Fraser, Esq.

"So long as Great Britain chose to subsidize the King of Persia, so long did his professions of friendship continue; but had any other power outbid his old ally, on condition of dropping correspondence with her, he would incontinently have transferred the worthless boon to his new friend; or if that power had used force the effect would have been the same; for the king could not have resisted a force of any strength." Other extracts could be brought forward, if more were necessary, to shew the perfect incompetency of Persia to oppose the dictates of Russia; but it is not probable that the court of St. Petersburgh would covet the possession of that impoverished country, nor would it be worth the delay required for its subjection, providing its resources were placed at the disposal of its powerful neighbour. In the latter case, Abbas Meerza, the heir apparent, or, if necessary, a more compliant prince of the forty alluded to, would be the nominee of the Czar. A slight sketch of the efficiency of the Russian army will be given, sufficient with other circumstances to maintain an opinion of the commanding superiority of that nation over its southern neighbour.

"In the mode of disciplining their forces, the Russians proceeded on the system most approved in Europe. Their infantry was confessedly excellent, composed of men in the prime of life, and carefully selected as best qualified for military service. Their artillery was of the best description, so far as the men, guns, carriages, and appointments, were concerned."—"The service of cavalry is less natural to the Russians than that of the infantry, but their horse regiments are nevertheless excellently trained, and have uniformly behaved well."*

This formidable character of the Russian army, added to its overwhelming numerical force, is enough to daunt the courage of better organized and more determined troops than are to be encountered in Eastern warfare. But there is yet a more dangerous arm peculiar to the Russian service, and which, above all others, is a description of troops that would be most valuable in such service as we are now treating of. "The Cossacks are a species of force belonging to Russia exclusively. The natives of the Don and the Volga hold their lands by military service, and enjoy certain immunities and prescriptions; in consequence of which each individual is obliged to serve four years in the Russia armies."—"It is as light cavalry that the Cossacks are, perhaps, unrivalled. They and their horses have been known to march

* Scott's Life of Napoleon Bonaparte.

100 miles in twenty-four hours, without halting. They plunge into woods, swim rivers, thread passes, cross deep morasses, and penetrate through deserts of snow, without undergoing material loss, or suffering from fatigue. No Russian army with a large body of Cossacks in front can be liable to surprise; nor, on the other hand, can an enemy, surrounded by them, ever be confident against it. In covering the retreat of their own army, their velocity, activity, and courage, render pursuit by the enemy's cavalry peculiarly dangerous; and in pursuing a flying enemy, these qualities are still more redoubtable." *

Such is the character of the parties that will come into immediate contact when the Russians advance towards India. It must be evident that no physical or moral force exists in Persia that could be brought to oppose the advance of a Russian army, and at this late stage of the Shah's declining power, the interposition of European aid to prop up his fallen grandeur would be unavailing. Such a line of policy, if pursued by Great Britain, would only tend to weaken her resources, and withdraw her strength from the quarter where the collision must eventually take place, should the Russians determine to invade India; for it will be seen hereafter, that if necessary they may approach the Indus without coming in contact with Persia, and independent of the resources of that country.

In examining the question before us, the imagination presents natural obstacles to a march through Eastern countries, where supplies are supposed to be scanty, and the enervating effects of tropical climates, are brought forward to quiet alarm, and as a security against a Russian force ever reaching the Indies. A fair investigation of the subject will be very likely to dispel a great part of such imaginary and dangerous security. A few remarks will be offered to illustrate the subject in question before going into detail on the routes, &c. "Persia, now that Georgia is separated from it, may be said to extend from the twenty-sixth to the fortieth degree of north latitude, and from the forty-fifth to the sixty-first degree of east longitude. There is, perhaps, no country of the same extent which has a greater diversity of climate. This difference, however, is more dependant on the elevation and soil than on the distance from the equator." †

The following report is made of the climate of Ispahan; and from the situation of that city in the centre of the kingdom it may be taken

as a fair estimate. " Excepting a few weeks in the year, the sky is unclouded and serene. The rains are never heavy, and the snow seldom lies long on the ground. The air is so pure and dry, that the finest polished metal may be exposed to it without being corroded by rust. The regularity of the seasons here appears extraordinary to a person accustomed to a more uncertain climate; for they change perceptibly almost to the hour. When spring commences, there is no spot in the world where Nature assumes a lovelier garb: the clearness of the streams, the shade of the lofty avenues, the fragrant luxuriance of the gardens, and the verdant beauty of the wide-spreading fields, combine with the finest climate to render it delightful; and we are almost disposed to agree with the representation which describes it as having an intoxicating effect upon the senses." *

The rains, which are not heavy, fall in the winter, or early in the spring. In the autumn the heats are more oppressive than in summer; but in winter and spring the climate is delightful; neither the heat nor the cold is excessive. This would appear to be the general character of the climate of Persia, and a closer investigation into it would, no doubt, favour that part lying most to the north, and, consequently, more immediately connected with these details.

The same excellent authority that was last quoted gives other particulars, which will be read with much interest, and which must further remove any prejudices against Persia. " Few countries can boast of better vegetable productions, or in greater variety. The gardens vie in beauty and luxuriance with any in the world; but from the parts which are highly cultivated, we may imagine the prosperity Persia might attain to under a just and settled government. Some of its finest and most extensive valleys, which are covered with the remains of cities and villages, are consigned to wandering tribes, and feed their cattle and flocks; and one may travel for a hundred miles, through regions once covered with grain, without seeing more than the few scattered fields deemed sufficient to furnish food for the families which have the range of the domain, and to give an annual supply of green shoots to fatten their horses." The prices of provisions will give a more decided idea of the capabilities of Persia even in her present neglected state. " Barley is often sold at a farthing a pound, and wheat on the average is not more than a third dearer. A cow costs from sixteen to twenty shillings; a

good sheep from six to eight; a goat from two to four: other articles of provision are in proportion." * In some parts of Persia fruit has hardly any value.

From these remarks it will be seen that Persia is not wanting in immediate resources towards furnishing the commissariat department of an army; and there can be little doubt but encouragement to the agriculturist, and the economy of resources, would soon produce all that might be required to maintain an army in that country. In revolving this point, it will be necessary to bear in mind that Teheran, the capital of Persia, which would, probably, be the head-quarters and dépôt of a Russian invading force, is not two hundred miles from the ports on the south shores of the Caspian Sea. Supplies may, therefore, be conveyed by water from the very heart of Russia, and transported to the army at a trifling expense. It is of equal importance to recollect that Herat, the extreme station at which a Russian force would arrive previous to direct operations towards India, is only 600 miles from Astrabad, a port south of the Caspian Sea; and where also *materiel*, &c. for an army would be brought by water communication by means of the Volga river from the centre of the empire.

If the above data carry conviction of the inability of Persia to resist the occupation of her territory by a Russian force, they will also shew that the former country must of necessity submit to the views of her powerful neighbour. We shall not proceed to investigate the use that may be made of this ascendancy, until a glance is directed to other Powers, who, from situation or policy, may be considered as interested and likely to oppose the designs of Russia. At the head of the list, Great Britain will stand the most determined and powerful enemy; and would, no doubt, excite the States adjacent to Russia to assist in checking the ascendancy of that nation. It is equally probable, that certain States of Europe will lend themselves to a project tending to weaken the force of England, and to strengthen her Northern rival. A barrier will therefore be reared, so that no efforts made by powers on the western side of Russia could materially check the development of her designs towards the East. The distracted state of the Turkish Empire precludes the expectation of any assistance from that quarter. An impoverished exchequer, and the disaffection of his subjects and governors, render Sultan Mahmoud the monarch of misrule and the sport

* Scott's Life of Napoleon Bonaparte.

† Sir John Malcolm.

* Sir John Malcolm.

* Sir John Malcolm.

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of revolution; and he is indebted for the very existence of his capital to the forbearance and interposition of foreign nations.

The rising power of Egypt may eventually mature a strong Asiatic government, and establish a force which, with the aid of European allies, might, through Syria, divert, if it did not check, the torrent of conquest as it rolled from the north. Such a diversion would be necessary to oblige Russia to occupy the Persian territory, and thereby to sacrifice a large portion of time and money, which otherwise she would save, by being enabled to make a direct advance on India. Unless the resources of Egypt and Syria are thus made subservient to the views of Great Britain, there appear no means of interposing a European force between Russia and India. From the eastern shore of the Mediterranean, at Scanderoon Bay, the route towards Persia is over the steppes of Mount Taurus, and is a footpath impassable for cannon or wheel carriages, till it reaches Diarbekr, a distance of 340 miles. From Diarbekr to Erzroom, through Arabkir, is a further distance of 220 miles, almost impracticable. At Erzroom a Russian force would be stationed, sufficiently effectual to check the advance of an enemy through such a country. Erzroom would be the rendezvous of a Russian army for the purpose of intimidating and keeping in check any disposition to interfere that might be evinced on the part of the Turkish government. This favourable position is thus noticed by a highly respected military writer.*

"In the event of any European power ever undertaking the invasion of Persia or India, there is certainly no spot east of Constantinople better calculated for assembling a large force than the plains of Erzroom; horses and cattle are cheap and abundant, forage is every where to be procured in the spring and summer, and a considerable stock of corn may be collected from the neighbouring provinces." Erzroom has further the advantage of being but a short distance from the port of Trebizond on the Black Sea, through which all requisite stores could be readily supplied. A reference to the map of those countries will also show the advantageous position of Erzroom for an advance into Persia. There are other routes which lead from the east shore of the Mediterranean towards Persia, but they are attended with difficulties, and are still less applicable to the present enquiry than the one above described.

* Macdonald Kinneir.

Should it, however, become the policy of Russia to occupy Persia before a force is pushed forward to invade India, the second campaign will be opened, having the eastern frontier of Persia, or the city of Herat, as the basis of operations. Herat is described as standing in a fertile plain, that is watered by a river crowded with villages and covered with fields of corn. The town which contains about 100,000 inhabitants, is commanded by a Prince of Persia, and is thus mentioned in an able article in a monthly periodical.* "It holds a central position, at almost an equal distance from the cities of Kerman, Yezd, Tubus, Toorsheez, Mushed, Bokhara, Balkh, and Candahar. It is one of the greatest emporiums of the commerce of Asia, and could draw supplies from all the places we have enumerated, and from many more of minor importance. The city itself is placed in a fertile and well watered valley, and is surrounded by extensive gardens and pastures. It enjoys a fine climate, it is amply stored with provisions at all times; it could, as we have stated, draw supplies from all the countries around it, and it is capable of furnishing every article which these countries afford. If any place is worthy to be designated, 'the key to India,' it certainly is Herat." We are also told that a considerable number of horses are bred in the Cabul dominions, and those of Herat are very fine. Camels are, however, on the whole, the animals most employed for carriage. The ox is used to plough, except perhaps in Balkh, where horses are so common.†

Having arrived at this favourable position, distant from the Indus between 700 and 800 miles, over roads that are in constant use for caravans, it is necessary to remark that Herat is accessible from Russia by another route, the greater part of which passes through a fertile country, that lies between this city and the south of the Caspian Sea. It will be examined, before we proceed to enquire into the nature of the intervening country between Herat and the Indus. The line of advance from the Caspian to Herat, is the second alluded to in the beginning of this enquiry. There can be little doubt but it would be the one adopted by a Russian army, and it will be found about 600 miles in length. The distance will therefore be no more than between 1300 and 1400 miles from the Caspian Sea to the Indus; the bare possibility of its practicability ought to be considered with attention.

* Blackwood's Magazine, No. 130.

† Account of the Kingdom of Cabul, by the Honourable Mountstuart Elphinstone.

Whether Persia is or is not occupied, there would be a body of irregular horse of that country, at the command of Russia, to keep open the communication between the Caspian and Herat, in case any disposition to interfere should be shewn by the Tartar tribes on the banks of the Oxus. The Persians have an hereditary and inveterate hatred towards the people of that country, and would readily accept the assistance of Russia, to be enabled to revenge themselves for former insults. Supposing, then, it became the policy of Russia to forego the conquest of Persia, and to purchase her co-operation by promises of future reward, an army destined to invade India would proceed to the occupation of Herat by this last named route passing through the province of Khorassan.

By means of the Volga, the Caspian Sea communicates with the heart of Russia, the inland navigation from Astracan, which lies at the mouth of that river, goes over a tract of 1434 miles, and passes through the most fertile regions of the empire. There is also a water communication between Astracan and St. Petersburgh, by means of the celebrated canal of Vishnei Voloshok.* Astracan is the great staple of the Caspian commerce, and is readily supplied with European merchandise from the ports of the Baltic. In the fourteenth century Europe was supplied with the produce of India, through the Caspian Sea and Astracan, and a direct communication with India has continued by the same route, which is that we are about to inquire into. The Caspian Sea, which has a length of 640 miles, and a breadth of 200, is navigated by vessels drawing from 9 to 10 feet water. There are extensive fisheries on it, which cause numerous vessels to be employed. Such facilities of conveyance formed to communicate with St. Petersburgh, and other cities of the empire, would render the transportation of an army to the opposite shore of easy accomplishment, whilst the uninterrupted navigation of the sea by Russia would also ensure a regularity of supplies. At Astracan there is a large and commodious harbour, with a dock yard and spacious quays. In July 1723, Peter the Great assembled an army at the city of Nijnei Novgorod, at the confluence of the Occa and Volga. From thence they proceeded down the latter river to the Caspian, and 33,000 men were landed at Daghستان, on the west side of the sea. He took the city of Derbent from the Persians, and extended his possessions, after which he returned to Astracan in October.

* Coxe's Travels in Poland, Russia, &c.

At the south extremity of the Caspian, the bay of Astrabad admits of a secure haven, and may average a week's sail from the opposite port of Astracan. Astrabad is a walled town, having 2 or 3000 houses; the neighbourhood is mentioned by a recent author,* who says, "Thus we reached Astrabad, journeying through a country, which for beauty and richness I have seldom seen equalled, and never surpassed." And in remarking on the country in the vicinity, he says, "There is no describing the beauty and richness of these pastures, all is like velvet, soft and smooth, varying only in the height, not in the thickness of the sward. Numerous camps of the Turkomans spotted it with their black tents, in parties of 50, 80, or 100 together, in every direction." At Astrabad a dépôt would be formed, and the army would assemble for further operations, in their progress towards Herat; but before enquiring into the route, some general remarks will be necessary on the country of Khorassan.

"The kingdom of Persia is bounded to the east by the great province of Khorassan, upwards of four hundred miles in length and near three hundred in breadth. This celebrated region contains many fruitful plains, some lofty and irregular ridges of mountains, and several wide tracts of desert. Except in its most fertile districts, it is but partially supplied with water, and from its position it has been more exposed to predatory invasions than any other country. Whenever Persia was distracted by internal factions, or had to sustain foreign attacks, the tribes of Tartary crossed the Oxus, and spread themselves over Khorassan:"— "Khorassan is peopled by many races; its warlike inhabitants boast their descent from Arabian, Kûrd, Turkish, and Afghan tribes, who came at different periods to subdue or to defend it; but neither their having so long inhabited the same soil, nor a sense of common danger, has softened those inveterate prejudices, or abated that rooted hatred with which these races regard each other; and it had been the policy of the Persian monarchs to increase divisions, enabling them to keep in subjection a country, the inhabitants of which, if united, would have been dangerous."†

In the Geographical Memoir of the Persian Empire we find the following remarks:—"It is much to be regretted, that our knowledge of this great, and to us most important tract of territory, is shamefully deficient."—"This province was once populous and flourishing, and adorned with many cities. The soil is, in general, excellent, and pro-

duces wine, fruit, corn, rice, and silk, in the greatest abundance, and of the very best quality; but it has so often been laid waste, and overrun by the most savage nations, that commerce and prosperity have utterly disappeared, the cities have fallen into decay, and the most fruitful regions have been converted into solitary deserts."* The province of Khorassan is occupied by tribes who are engaged incessantly in a predatory warfare, invading the territories of each other, and carrying the inhabitants into slavery.

These remarks on Khorassan will be read with interest, more particularly as no other country intervenes between Astrabad on the shores of the Caspian Sea and the city of Herat, which has been already denominated "the key to India." On the borders of Khorassan, and to the north of Astrabad, is the province of Khaurizm, comprising the country between the Caspian and the Oxus; the wandering tribes breed sheep, camels, and horses; the steppes that border on the Caspian abound in prodigious droves of cattle, and "there is scarcely a man in Toorkaustaun so indigent as to walk on foot; even beggars travel on horseback, or at least on asses."† Further particulars of these tribes will be given when the eastern routes are considered. It is stated of those tribes, that "next to their horses, the most valuable possession of the Toorkaumauns is the camels, of these are bred among them, and generally in Khorassan, three different sorts."‡ Individuals are said to have as many as seven hundred camels. They are sold at from 120 to 200 Persian rupees each, and carry from 450 lbs. to 1100 lbs. English.

Towards the end of the last century, a Persian force of 60 or 80,000 men, under Aga Mahomed Khan, proceeded from Astrabad to Mushed. The following particulars of the country between those places are borrowed from an author already quoted,§ and who visited Mushed in 1821-22. From Astrabad toward Mushed the road for eighty-two miles passes across a rich and verdant district, and ascends a mountain-pass at Goorgaun. A dreary desert, but with water, next extends over a rough country for ninety-two miles to Killa Khan. The road then passes through a fine cultivated country, presenting a highland scene, after which it descends into a valley by a road which carriages might have run, and reaches Sheerwan, a distance of seventy-six miles. Sheerwan is a populous town, the valley in which it is situated is so fertile that

it gives credibility to the almost extravagant account of its produce. This valley begins considerably above Sheerwan, from whence the road continues to pass through it for thirty-two miles, and reaches Cochoon, having about 20,000 inhabitants. It is asserted that when the king was at Cochoon, with an army, and its followers of all sorts, amounting to not less than 300,000 souls, with nearly as many head of animals, baggage cattle, including corn and straw, were so plenty, that barley sold at the rate of 20 maunds, (or 140 lbs.) for a rupee, (2s. sterling) and that, in fact, provisions were so abundant in the camp, as hardly to be of any value."* Passing Cochoon, and continuing 91 miles further in the same valley, the road reaches Mushed, the capital of Persian Khorassan. The whole distance from Astrabad to this place by the above route is 373 miles. "The valley of Mushed is of great length, it may be described as taking its rise ten or twelve miles to the north-west of Sheerwan, and extending almost uninterruptedly for fifty miles beyond Mushed;"—it has a low rocky pass of about four miles, and probably extends greatest part of the way to Herat; it varies in breadth from twelve to thirty miles; it contains in its limits several towns with their dependencies, and a great extent of cultivated land."† Mushed is in the dominions of Persia, it is the residence of a prince of the blood, and has about 32,000 inhabitants. The tribes in the vicinity, although of little consequence in regular warfare, are addicted to plunder, and are excellent horsemen; they are armed with spears and swords, or bows and arrows. There is another route from the south of the Caspian to Mushed, through Nishapoor, which reduces the distance to Mushed to less than 300 miles, and passes over a country much like that above described. It is said of this route, "the plains and district of Nishapoor have at all times been celebrated for fertility; when looking from the top of the old ark, (castle) at the numerous villages on either side, and enquiring whether they were all inhabited, I was answered in the affirmative."‡ When within fifty miles of Mushed, "we enjoyed a very noble view of this fine country, running from south-east by east, to north-west by west, for full eighty miles in length, by fifty to sixty miles in width, and well studded with villages."— "It was a rich and pleasing scene, and, out of question, by far the most populous and cultivated tract I had seen in Persia."§ Another authority says, "nothing could have enabled this city (Nishapoor) to regain the degree of prosperity it had again attained, except its fine soil and

* Travels of J. B. Fraser, Esq., 1821-22.

† Sir John Malcolm.

* Macdonald Kinneir. (*Geographical Memoir of the Persian Empire*.)

† Elphinstone.

‡ Fraser.

§ Ibid.

* Fraser.

† Ibid.

‡ Ibid.

§ Ibid.

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delightful climate.”* It is further said of this territory: “Nishapoor, at one time one of the greatest and richest cities of Khorassan, is seated in a plain, formerly irrigated by about 12,000 aqueducts, most of which have been suffered to fall to decay, and are now destitute of water.”—“The city is at present subject to the dominion of the King of Persia, and has nine districts dependant on it, each of which has about ten walled villages.”† A narrow entrance through a low pass separates this territory from that of Mushed.

If there be any difficulty in an army accomplishing this march, it would appear to be in crossing a bad road from Astrabad, in ascending the mountain pass, and marching over the desert beyond it; but their vicinity to Astrabad would enable such steps to be taken as would conquer any obstacles likely to offer, if undertaken at a favourable season of the year. It is only reasonable, therefore, to admit that an army, possessing the resources of the country, may be transplanted from the Caspian Sea to Mushed without any very great privation or delay. Of Mushed it is said by the same author,‡ who resided there above a month, that “provisions are in general plentiful and reasonable.” From the above causes, and with the ready communication between this place and the frontier of the Russian empire, a force would have little difficulty in completing the necessary arrangements for pursuing their route from Mushed through the fertile valley that extends greatest part of the way to Herat.

The authority from which materials have been furnished for the route from Astrabad to Mushed proceeded no further in this direction. He goes on to remark that “The road from Mushed to Herat must also pass through several well-peopled and well-cultivated districts.”—“About mid-way between those places is a large town called Toorbut-e-jam, the chief place of a fertile and well-peopled district.”—We also read that “Ghourian, or Ghorian, is the name of a district and considerable town west-north west from Herat, between thirty and forty miles on the road to Mushed; the town is situated in a fertile country, and, with the district, yields to the government of Herat a revenue of 50,000 tomauns.”§ The road by Toorbut-e-jam is said to be 57 farsangs of four miles each, and it passes through a valley with villages and water; the only obstacle in this route would seem to be the rocky pass that has

been mentioned to extend for four miles. Another road between Mushed and Herat is said to be 238 miles. By this it would appear that a Russian force can march from Astrabad to Herat through a country already as practicable as others in the East, and without the probability of any material suffering; and that they may arrive at the latter station by a journey of 610 miles.

There are other routes from the Caspian Sea to Herat, and that in general use, as appears by the map, is much shorter. These routes are at all times frequented by caravans trading between Russia and the East, and must be well known to the authorities at St. Petersburg. The position and resources of Herat have already been adverted to; and to contemplate its occupation by a rival European power, must be a subject for much speculation and alarm. The vicinity of that city to the Indus, and its communication with different places on the banks of that river, by well-known and perfectly practicable roads of no more than between 700 and 800 miles, would produce external and internal agitation, that could not fail to endanger a government organized like that of India. It will be much the safer plan to lay bare the probable consequences of such a contingency, and make preparations to oppose them while there is time to do so. There is less objection to this mode of treating the subject, because timely attention to it and precautionary measures may effectually prevent the attempt of Russia in any endeavour to reach India; whilst a longer neglect of the British Government to establish its influence, if not its power, as far as the banks of the Indus, must accelerate the execution of a project which, in its most favourable termination, would be attended with large and ruinous expense.

The remainder of the distance over which a force would have to pass from Herat to reach the Indus, is included in the kingdom of Cabul, a country which has been most fully described by an able writer,* from whose account the following remarks are principally taken. Cabul has its northern boundary formed by a continuation of the Hindoo Koosh, or the great range of mountains which extends across the north of Hindoostan, and terminates in under features near the city of Herat. The country between Herat and the Indus is nearly divided by the city of Candahah; the inhabitants who occupy the portion of it nearest Herat are thus described. “Scattered over an extensive country, the Western Afghans are too distant from each other to acquire either the views or

the habits of strife which belong to a crowded population; each horde drives its flocks over its extensive lands, or the still wide range of unappropriated pasture; without a rival and often without a neighbour.” We are told by the same authority, that these tribes mostly inhabit high and bleak downs, interspersed with moderate hills, in some places desert, and in others ill-cultivated; bare, open, better fitted for pasture than for the plough; and much inhabited by shepherds and moveable camps. The countries of the Eastern Afghans “consist of flat and low-lying plains, or of strongly marked ranges of mountains. The plains are hot and fertile, generally populous, and almost all inhabited by fixed residents. The mountains are high and rugged, inhabited by tribes separate from each other, and only known to the rest of the world by their assaults on strangers who penetrate to their haunts, or by their incursions into the neighbouring plains.”*

Those people, forming an assemblage of common-wealths, have but little stability as a nation; and we find “their armies are very small, seldom exceeding 10,000 men on each side, and these are generally ill-paid and disobedient. The victory is decided by some chief’s going over to the enemy; on which the greater part of the army either follows his example, or takes to flight. Even when battle is decided by the sword there is little bloodshed, and that is chiefly among the great Khauns, who are interested in the result, the common soldiers shewing much indifference to the issue.”†

It is further remarked, that “Many parts of the country, particularly round the cities, are as highly cultivated as any part of the world; in remoter districts some well cultivated tracts are to be met with, and even the most deserted regions afford occasional marks of the industry of the husbandman.” The climate appears most favourable; “its annual heat, on an average of different places, is greater than that of England, and less than that of India;‡ and “To sum up the character of the climate of the whole country, Afghanistaun must be pronounced dry, and little subject to rain, clouds, or fogs.” Such is the nature of the territory through which a force would have to proceed from Herat to the Indus.

We will complete our observations on this part of the investigation by an extract from another influential writer,§ whose opinion will be found in accordance with those previously quoted. “The Afghan tribes

* Sir John Malcolm.

† Macdonald Kinneir.

‡ Fraser.

§ A tomaun has been estimated at a pound sterling, but it is not of equal value.

* Hon. Mountstuart Elphinstone.

* Hon. Mountstuart Elphinstone.

† Ibid.

‡ Ibid.

§ Sir John Malcolm.

were converted to the Mohamedan religion. Their condition, from the first periods of which we have any authentic records, has undergone very little change. Their chiefs have always been more anxious for personal independence than for the strength of the government they lived under; and their followers have enjoyed a savage freedom, which made them hostile to every effort to reduce the clans into one mass; this, it was obvious, could never be effected without subverting that order of society which they were born under and gloried in. A nation so constituted was unable to resist any formidable attack; and we find that the Afghans made hardly any opposition to Mahmood of Ghizni, to Ghenghiz, or to Timoor; and that their country was long divided between the monarchs of India and Persia: but they were always turbulent and dangerous subjects." We also find that Nadir Shah, soon after ascending the throne of Persia, marched an army of 80,000 men, with artillery, through the province of Khorassan, and reached Candahah without any difficulty. The same monarch moved forward and captured the city of Cabul, from whence, by rapid marches, he invaded India.—"Almost all the governors of the provinces through which he passed, anticipated the fate of the empire by their surrender."^{*}

Among the many successful irruptions made at different times in the fated country beyond the Indus, none were more remarkable than those of the famous Mahmoud of Ghizni, who reigned at the termination of the tenth and during a part of the eleventh century. He advanced into Hindooostan by various routes, and, to shew the resources of the country we are treating of, his army was on one occasion attended by 20,000 camels laden with water.[†] His route, after crossing the Indus, passed through Moultan and across the Great Desert to Ajmeer. With the resources and means of drawing supplies which Herat has been mentioned to possess, there can be but little doubt of the power of obtaining every requisite for the further advance of an army from that place. The city of Candahah, which has been already named, is about half way from Herat to the Indus, and will be the next station to attain. The distance is said to be 105 parasangs or 370 miles; the adjacent country is "a vast sterile plain, without wood, pasture, corn, or habitation, and in many places destitute of fresh water."[‡] Another author[§] describes it as a fine road fit for guns, through a cultivated country. Around Candahah, the country, according to the historian

of the kingdom of Cabul,* is fertile and highly cultivated, and the city is wealthy and flourishing, with fruit and provisions cheap and abundant. We have no means of ascertaining the precise nature of this route, which was probably reported on at various seasons when it would have a different appearance, but on referring to the Map, it appears that some streams divide it, and there are several places marked in the line of march. It probably corresponds to the account given of it by the high authority last quoted, who says, "The whole extent approaches to the nature of a desert. The southern parts are sandy, and the northern consists of hard earth, mixed sometimes with rocks and even with low hills."—"Yet this discouraging abode is by no means destitute of inhabitants. The banks of the Furrah road, the Khaush road, and other streams, are well cultivated, and produce wheat, barley, pulse, and abundance of excellent melons."[†] The distance on the Map also corresponds with that stated above. Arrangements would no doubt be required to enable an army to effect this march, but it does not appear there can be any obstacle materially to check their advance. No tract of country can possess a less portion of the necessities of life than the Desert between Cosseir and the Nile; and yet that sterile tract was crossed in 1801 by several thousand men of the British army with but a trifling loss; and when arrangements were afterwards matured, a battalion marched over it in June, the most unfavourable month in the year, with the loss of only a boy.

From Candahah there are different roads in use by which caravans proceed to India. One to the south crosses the Indus by boats at Meerpoor, which is near the city of Moultan, and is at a distance of 350 miles from Candahah. This route presents no natural obstacle to an advance, and has been pursued by former invaders. It is thus noticed by an authority we have before cited.[‡] "This is, perhaps, our most vulnerable frontier, and after the passage of the Indus, the nature of the country, which is flat, and abundantly supplied with provisions, offers no serious impediments to the advance of a large body of men." Another route ascends to Cabul, the capital of the Afghan Empire, and passes on to the city of Attock, where the Indus is fordable. This route was used by Alexander, and has been followed by modern conquerors, of whom Sultan Mahmood, with an army of 30,000 infantry and 100,000 cavalry, passed Attock and skirted the mountains of Cashmere, from whence he descended into the plains of Hindooostan.

The route from Candahah to Cabul, by a road of 176 miles, passes over a country in several parts well cultivated and productive. At Cabul provisions are found in considerable quantities. A river, fordable in dry weather, passes this place, skirting the chain of mountains, and falls into the Indus near Attock. The road from Cabul passes through Paishaweer, "a beautiful valley on the Indus. The town of Paishaweer is still of some magnitude, having 100,000 inhabitants."^{*} The distance of this place from Cabul is 180 miles, and from Paishaweer to Attock on the Indus is 50 miles. The vicinity of Attock is the only place where the Indus can be conveniently crossed; here the river is of great breadth, black, rapid, and interspersed with islands, all of which may be easily defended.[†] Another authority says, "The Indus indeed was forded above the junction (at Attock), by Shaub Shuja and his army, in the end of the winter of 1809; but this was talked of as a miracle wrought in the king's favour; and I never heard of any other ford on the Indus, from the place whence it issues from the mountains to the sea."[‡]

The route from Candahar to Attock would appear to be 406 miles, and to offer little obstacle to the regular approach of an army. On the east side of the Indus at Attock is the Punjab, or "five waters," from the five celebrated rivers that flow through it. "The climate is exceedingly healthy; and the country is highly cultivated and very populous."[§] By the information we have been able to collect, the distance from Herat to Attock is 776 miles, and the whole march from the shores of the Caspian to the latter place would be by a route of 1377 miles.

There is nothing either in the nature of the countries to be passed through, or in the disposition of their inhabitants to render this undertaking one of insurmountable difficulty, or of necessary protraction. It ought to be expected whenever the policy of the government of Russia may hold it fit to separate from its friendly alliance with Great Britain. At present the European energies of the British government in India are chiefly confined to the ports of Calcutta, Madras, and Bombay, and other places near the coast. It will suffice at this moment to remark that the principal dépôt, above mentioned, of these three, is by the dâk, or post route, 1480 miles from Attock, or a greater distance than a Russian force would require to march to reach the same place. Madras is yet farther from the point of contact than Calcutta.

* Sir John Malcolm.

[†] Ibid.

[‡] Colonel Macdonald Kinneir.

[§] Fraser.

* Elphinstone.

[†] Ibid.

[‡] Macdonald Kinneir.

* Elphinstone.

[†] Macdonald Kinneir.

[‡] Elphinstone. [§] Sir John Malcolm.

Bombay is nearer the Indus than either of the other Presidencies, but its military establishment is very inferior in numbers. An attempt will be made hereafter to point out, that through the medium of steam navigation on the Ganges, and by the western shore of India and the Indus, effectual steps may be taken to improve the communication with the probable point of contact, to remove, in a great measure, or totally to dispel the danger to be apprehended from any attempt that might be made by Russia to subvert British ascendancy in India. It will be necessary, in the first instance, to bestow a hasty view on the eastern routes already alluded to.

After what has been advanced on the subject of India being exposed to invasion, it may appear unnecessary to treat on another route from Russia to that country, particularly as our information as to the part of Asia we are about to traverse, is so much less defined than on either of the preceding lines of communication. But it will be found that the Court of St. Petersburg have directed their attention to this quarter, which possess advantages that have also been favourably noted by modern travellers. By this route Russia has the means of making an approach to India without touching on the territory of Persia, and through nations whose arms could be turned against the latter, if the policy of the northern autocrat should adopt such a mode of proceeding. Any attempt, therefore, of an European power to oppose the designs of Russia by a movement in the west of Persia, will be seen to be totally useless. It will be evident that the whole weight of such opposition should be made on the banks of the Indus. But if the independence and disposition of Persia were such as to promise, in conjunction with a European nation, to assume a strength likely to put at defiance a combined attack of Russians and Tartars, the reasoning would be otherwise. More attention would be due to this subject if Russia did not command the means that have been pointed out of an advance to India through Khorassan, and which route will be seen to be equally, if not more practicable, as also, under existing circumstances, it appears the most desirable. There may, however, be advantages in the eastern routes that will render them the most advantageous when the localities of the districts they pass through become better known. The Russian government may be presumed to be in possession of the necessary details on which to determine the best line of advance, and enough has been divulged by their officers to create much speculation, and to demand investigation on this point.

Envos were despatched from St. Petersburg to the principal towns on the river Oxus, and the reports published of them have been ably discussed ~~on~~ by a military author,* and by others in this country. From the Russian authorities the few hints that have been thrown out tend greatly to illustrate this inquiry, and there is here added such information as must shew how desirable it is to be better informed on the resources the Russians would have at command, should they attempt, by pursuing the course of the Oxus river, to pass from their frontier to the Indus. History points out the propensity at all times inherent in the demi-savage nations of Tartary to overrun and plunder their less powerful neighbours. And it will be evident that the tide of prejudice and superior enterprise would in this instance flow with Russia from the north, towards the less warlike inhabitants of Hindoostan.

Should it be determined to prosecute an advance to India by this line of route, a landing would be effected on the eastern side of the Caspian Sea, where there are harbours now in use for merchants trading by caravans with the nation occupying the territory bordering on the Oxus river. The Tartar havens best suited to this purpose are those of Mangushlac Bay and Balkan Bay, either of which are within a week's sail of Astracan. Mangushlac is the one that affords the most secure harbour, and is generally preferred.†

It has already been mentioned that a Russian force may be brought into the Caspian Sea by means of the Volga river; it will also be found that a force may be detached from Orenburgh, which city carries on a considerable trade with the Turkomans, who inhabit the country lying between the Caspian and the Oxus. At Orenburgh there is a garrison of 10 or 15,000 men, and that city communicates by means of the Oral river with the Caspian, from whence it is distant about 300 miles. At either of the specified havens a force would assemble and prepare for further operations in the direction of the Oxus. The country to be crossed over is included in the province of Khaurizm. It is that already named as lying to the north of Khorassan, and inhabited by tribes of Turkomans. They are not united, or strong enough to become formidable, but possess a predatory disposition, that causes them to be considered troublesome neighbours. These tribes are often at war with each other, and acknowledge no power but that of a patriarchal chief, whose territory comprises steppes and

meadows, covered with prodigious droves of cattle which belong to his clan. Amidst the peaceful pursuits of these pastoral nations, there are some restless spirits who are urged by savage love for plunder, to make inroads into adjoining countries; and there is a fine race of horses throughout these territories that encourage them to wage this description of warfare. We are further informed that a horse trained for these forayes is capable of performing a hundred miles a day. "He is bred from the Arabian, but crossed with the breed of the country; and the fine pastures here have given him great size and strength."* Such are the animals on which these marauders make their inroads in parties of twenty and thirty together. It must be apparent, that however the Nomade people, who comprise these nations, are suited to conquest by moving *en masse*, accompanied with their camels, horses, and sheep, and all their worldly possessions to occupy a finer territory than the one they inhabit, they are totally incapable of resisting powerful invaders. They have no organization or science, and the warriors cannot retreat from their families and flocks to starve amidst desert sands or mountain fastnesses.

A high authority, whom we have frequently quoted, remarks on the inhabitants of this country. "Although the hostility of these barbarians was a serious evil to the districts which they visited, they had no collective strength that could render them formidable as an enemy to Persia."† The situation, the importance, and even the name of these tribes, often change, and prevent any estimate being formed of their real strength; about 60,000 families of the Kirgees hordes swear fidelity to the Emperor of Russia.

If a Russian force assembled at one of the harbours on the east side of the Caspian, and thereby threatened the kingdom of Khaurizm on the south, while a demonstration to the same effect was made from Orenburgh and the Russian territory that borders the country on the north, there can be little doubt but the people who occupy the intermediate space will be disposed to unite in designs so perfectly in accordance with their restless spirit. A force would at once be collected from among them to form an advance guard, and collect other adventurers for a crusade against the idols of Hindoostan. It is therefore presumed that the Russians will find allies, and have the territorial resources at their disposal. Abundance of carriage

* Colonel De Lacy Evans.

† Coxe's Travels in Russia.

* Sir John Malcolm.

† Ibid.

animals would thus be supplied for the purpose of transport across the desert which intervenes between the Caspian Sea, and Khiva on the border of the Oxus, or Amu river, and the next place of rendezvous for the army. Pallas, an intelligent traveller, was informed that some individuals of the middle horde of Kirgees had 10,000 horses, 300 camels, 300 or 400 sheep, and more than 2000 goats.

The city of Khiva bears the name of a district, containing about 300,000 inhabitants, and stands in a cultivated space or oasis, about 100 miles square. This section of country is watered by canals from the Oxus, and is highly productive. The Russian envoy* who visited it by the route from Balkan Bay in 1819, reports, that he considers the road between the Caspian and Khiva quite practicable, and that the latter place may be occupied without difficulty. The towns in this region have walls of mud and pottery, and the fortifications of the city of Khiva, which are built of the same materials, are totally unprovided with artillery. An army, collected in cases of danger, is comprised of horsemen from the neighbourhood, totally without discipline and without subordination. In these countries each trooper is his own commissary, and is generally accompanied by a camel which carries his provisions. Such an assemblage can never be formidable against a regular force, and their disposition to act would depend altogether on the object and character of the invader. The resources of the state are estimated very low by the Russian envoy, and when a comparison is instituted between his report and the operations of former invaders, there is no just ground to doubt his accuracy.

Khiva was invaded by Nadir Shah about a century since, when the khan, or chief, assembled an army of 20,000 men to oppose him, but afterwards surrendered at discretion. It is now calculated that about 12,000 men would be collected in case of war; but persons who have seen such disorganised masses must be led to agree with the Russian envoy, when he says that "a corps of 3000 Russians, commanded by a determined and disinterested chief, would be sufficient to conquer and preserve this country, which would be so advantageous to Russia, by reason of the importance of its commercial relations with India."

The route from the Bay of Balkan to Khiva goes over a country but scantily supplied with water, and the march was made by the Russian mission in the month of December; the time occupied was sixteen days

by caravan. They did not proceed more than twenty miles a day, but the regular march of trading caravans may be estimated at twelve or fourteen hours' travelling, or at thirty or thirty-six miles per day. The distance from Mangushlac Bay to Khiva may be one-third more than from the Bay of Balkan to the latter place. Mr. Fraser says of the route,* (from Mangushlac to Khiva), "five different persons, well acquainted with the country and trade, agreed in estimating it to me at about ten days' journey of six farsangs each, or about 240 miles."—"The country is inhabited by tribes of wandering Toorkomans, who pasture their flocks upon the steppes, and caravans continually pass and repass between Khiva and Mangushlac Bay."†

A Russian force, marching by either of the above routes from the borders of the Caspian, would reach the Oxus in less time than a month, and it will be admitted, that with proper arrangements, there is nothing in the performance of this march by detachments of troops to render it impracticable, when it is considered that carriage animals may be procured to any required extent.

On reaching Khiva, the army would have water communication with the Oxus, which passes fifteen miles from the city, and by means of that river, intercourse would be opened with fertile countries that lie on its banks, and also with the sea of Aral, into which the Oxus empties itself about 150 miles below Khiva. The traveller, from whom we have so often quoted in treating of the district of Khorassan, offers some remarks on the report of the Russian envoy, and thinks a force might not only capture, but retain Khiva. He says, "The Russians have long entertained commercial relations with Khiva, which they have sought to strengthen in various ways, and with various objects. The conquest of Khiva by the Russians would, if they were to resolve on it, be an affair of no serious difficulty; and, according to the present line of policy, the attempt will probably be made at no very remote period."‡

The performance of this march deserves every consideration, as will be seen when the remaining part of the route is investigated. If a Russian force should establish itself at Khiva, they would be enabled to pursue their further operations with the advantage of water carriage for the greatest portion of the way to India. On the sea of Aral, "there are numerous large fishing boats employed by the natives."§ It does not appear from any account we can find of this territory what

facility there may be of opening a communication to make these boats applicable to the operations under consideration. Boats and rafts are used on the Oxus for the purposes of traffic; and it is mentioned by travellers, whom we shall hereafter quote, that wood may be had on parts of this river. A want of correct information on these important points must render the enquiry into this route one of much doubt, and prevents the possibility of our coming to a satisfactory conclusion as to its accomplishment in a definite time. Like the Indus, and other rivers that have their source in high mountains, the Oxus must have a considerable current. Its navigation is said to be carried on by tracking; but it must vary at all seasons, and be liable to the uncertainty that has been stated to govern the progress of boats on the Nile. There cannot, however, be a doubt but that vessels can ascend the river at an average of at least fourteen miles a day, and the same rate of advance may be given to a force having their baggage and *materiel* conveyed for them as would here be the case. The territory of Khiva extends on the banks of the Oxus for between 100 and 200 miles.

About 250 miles south of Khiva is the fertile province of Bokhara, with a city situated in an oasis; and, like Khiva, some distance from the bank of the Oxus river, and having a water communication with it. A trade is carried on by the Oxus from Khiva through this district, and the voyage to Bokhara is said to be performed by laden boats in seven days. This rate probably applies to a favourable season. A mission was also despatched from St. Petersburg to Bokhara in 1820. Baron Mayendorff, who accompanied it, has furnished the public with some remarks on the country. He states the oasis of Bokhara to comprise about 300 square miles, and to contain a population of two and a half millions of inhabitants. The city is described as surrounded with fields, with canals, with avenues of trees; on every side are villages, gardens, orchards, mosques, and minarets; "in a word," says the Baron, "we might suppose ourselves transported into an enchanted country." The military resources of this country are described as similar to those of Khiva, except that the people here are still less warlike; there are three or four Persian pieces of artillery that might be used. If we may judge from the descriptions given of this place, an army passing on the Oxus would have little to obstruct its march from any opposition they would be likely to meet with from the natives of Bokhara. The banks of the Oxus are said to be capable of cultivation, and there are many spots scattered over the vast tract of

* Captain Mouravieff.

† Journey into Khorassan, by J. B. Fraser. ‡ Ibid. § Evans.

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country on its borders that are highly cultivated and productive. The following extracts will throw some light on these almost unknown regions. Duhalde and Le Compte,* two missionaries who travelled through it, describe all that part between the River Sir on the north, and the Hindoo range of mountains on the south, and going eastward from the Oxus, as the kingdom of Bokhararia, having a length between the above extremes of 600 miles. Over this tract they say "The mountains abound with the richest mines; the valleys are of an astonishing fertility, in all sorts of fruits and herbs; the fields are covered with grass the height of a man; the rivers swarm with the most excellent fish; and wood, which is so scarce over Great Tartary, is found here in great plenty in many different parts; in a word, it is the best cultivated country in all the northern part of Asia." Another district of the country, lying in the neighbourhood of the city of Bokhara, and bordering a stream that connects with the Oxus, is also described: "Kurshi, another city in this kingdom, is situated on the north side of the River Amu, (or Oxus) and is, next to the capital, the best city in the kingdom, being large, populous, and well built. The neighbouring lands are exceedingly fertile in all sorts of grain and fruits; and the inhabitants carry on a considerable trade to the northern part of the Indus."† Samar-kand, an adjoining province spoken of in equally favourable terms, is also on a river that runs into the Oxus. These accounts are borne out by the reports of the envoy already quoted, and of modern travellers, one of whom remarks:‡ "In all the regions of the earth there is not a more flourishing or more delightful country than this, especially the district of Bokhara." A distinguished authority§ also mentions: "Those who imagine the Uzbegs to be savage Tartars, wandering over wild and desolate regions, will be surprised to hear that the city of Bokhara is equal in population to that of Paishawer, and consequently superior to any in England except London; that it contains numerous colleges, which might accommodate from sixty to six hundred students each, and which have professors paid by the king; or by private foundations; that it abounds in caravanserais, where merchants of all nations meet with great encouragement; and that all religions are fully tolerated by a prince and people above all others attached to their own belief."

* Moore's Voyages, Travels, &c.

† Sir William Ousley.

‡ Moore's Travels.

§ Elphinstone.

Some further information concerning this country will be essential to illustrate our enquiry. The historian of Persia already quoted,* gives many particulars connected with the habits and former deeds of these nations. An estimate may be formed of their capabilities as a military power from the following proceedings that occurred during the government of the most powerful ruler that has appeared in this country for a length of time. A religious devotee, called Begge Jān, by a continuance of artful conduct, commanded a respect and devotion from his followers almost equal to that obtained by Mohamed, whose character he appears closely to have imitated. He obtained sufficient influence to destroy the drinking and gambling houses at Bokhara, which are said to have amounted to several thousands, and in their place established mosques and colleges, the latter attended by 30,000 students. "Ignorance and superstition are ever united," says Sir John Malcolm, "and the Tartars were easily persuaded that a leader who contemned the worldly pleasures they prized, and who preferred the patched mantle and crooked staff of a mendicant priest, to a royal ruler and sceptre, must act under the immediate direction of the Divine Being." Such a man, in many of his acts and works similar to the founder of the Mohamedan dynasty, was enabled to gain a complete ascendancy over the rude nations of Tartary, and to organize a force far surpassing any that could be expected to assemble in the present day. This religious chief, who was predecessor to the present Khan, rode at the head of his armies, and established his sway over almost the whole country between the Oxus and Jaxartes, and to the Lake of Aral. He made constant incursions into the country of Afghan and into Khorassan. His army was said to amount to sixty thousand horse, but he was seldom attended with half that number. Other rulers have at different times also attained great celebrity in these wilds, and from their military genius have attracted followers, that at length immortalized their name by enabling them to attain pre-eminence and power throughout neighbouring countries.

It was in these regions that Timour, better known as Tamerlane, began a career that ended in a brilliant series of victories. Such leaders fascinate the uncultivated mind by some act of superior boldness, and lead their followers on to battle, where "his success makes him their king; his failure reduces him to their equal." We hear of no master spirit similar to the above, and that would now be likely

* Sir John Malcolm.

to array the hordes of Tartary against an invader. One of this character may arise in time of need, and it is possible that the true believers may be again engaged in a war of extermination, whilst they call out, "O Prophet! fight with the infidels and the unbelievers." Nor can there be a more likely place for the sable disciples of Mohamed to re-unite than in the vicinity of the mosques of Bokhara, a city that nearly corresponds to Rome in the Catholic world. Such chances will attend the progress of a Christian advance, and must have weight when it is known that the chief last named marched from the banks of the Oxus to the conquest of Moscow. How the prejudices of the people will work in the event of a Russian invasion of their country, is a question not to be answered. Should they give way to their love of plunder, and join an attempt to ransack the temples of idolaters on the plains of Hindoostan, they will be following a route that was successfully pursued by Timour with 92,000 horsemen.

Suppose that the invaders have over-awed or conciliated the nations they meet with in their progress, and that they continue to pass through countries such as have been described until they reach the district of Balkh, where the navigation of the river ceases. Balkh lies on the north side of the range of mountains that divides Tartary from Hindoostan. The time taken to perform the voyage from Bokhara to this place is, said to be five days, making the voyage from Khiva to Balkh to be, altogether one of thirteen days. It has already been remarked that the distance by the river is but imperfectly known, but it is not likely to exceed a line of 700 miles, which, at the rate of advance that has been set down for an army, would take about two months.

Before we leave the banks of the Oxus, it will be proper to observe that the imperfect knowledge we have of that stream, in all probability, leads to our selection of a route far less advantageous than some other that might become obvious with a better acquaintance of the country. There is a branch of the Oxus running from opposite Bokhara towards Herat; and in the same direction there is said to be a practicable road between those places of about 600 miles, through a fertile and watered country. This uncertainty obliges us in this enquiry to follow the line of march in constant use by caravans, and proceeding through Balkh in progress towards the Indus.

The town of Balkh is situated about thirty miles from the point where the Oxus is navigable; and it will be necessary to examine the capabilities of this province, where the army would be obliged to

abandon their water carriage, and have recourse to baggage animals. Before advancing into the kingdom of Cabul, which we are now arrived at, we shall take a retrospective view of the nations passed over in our progress from the Russian territory, and it will be remarked that the current of superior enterprise and martial acquirements rolls on from the hardy race of Scythians to the effeminate people of the East. The Turkomaun who inhabits the district bordering on Russia, and who lives in tents, is famed for his predatory habits, and dreaded for his inroads into peaceful countries. The same character extends but partially to the Khivians, a portion of whom are resident cultivators of the soil. It is remarked of their neighbours: "The Bokharians are more civilized than the Khivians, three times as numerous, but more commercial, and less warlike."* The effect of climate, as we approach the equator, and the enervating nature of its temperament, continue to be equally observable, by the following account that is given of the inhabitants of Balkh and its neighbourhood, where we are told, "They are so different from the Northern Tartars that they never engage in wars, but apply themselves to the arts of peace, in manufacturing their silks, and carrying on an extensive commerce, for which they are treated by their savage neighbours as cowardly people."† Those nations south of the range of mountains that separates the Indus from the Oxus, and which are in the Afghan country, have already been described; their characters may be on a par with their neighbours in the Punjab, or on the opposite side of the Indus in the same parallel of latitude; and it is well known that the British army in Hindooostan look to that part of India for their best recruits. If a favourable application of these circumstances is admitted as likely, with other causes, to enable a Russian force to arrive at Balkh, there will be no scarcity of carriage animals in a country "famous for a strong and active breed of horses," from whence the markets of India are in a great measure supplied.

The French missionaries extended their journey to Balkh. They describe the province as being about 300 miles in length and 240 in breadth, and as one of the most fertile in this part of Tartary. "The city of Balkh, which gives the name to the province, is situated fifty miles from the borders of Persia, on the River Debask, which about forty miles to the westward runs into the River Amu, (or Oxus.) Balkh is at present the most considerable town inhabited by the Mohamedan

Tartars, being large, fair, and well peopled. All foreigners having free liberty to trade in this city, it is now become a place of great merchandize, and like a middle stage between Bokhara and the Indies." Another authority* says of Balkh: "The country round the city is flat, fertile, and well cultivated. It is said to contain 360 villages, and is watered by eighteen canals drawn from a celebrated reservoir in the Paropamisan mountains."—"The best accounts I can obtain, assign to the whole country to which I have applied the name of Balkh, a population of one million." The same writer also remarks: "In general the horses of the Afghan dominions are not remarkably good, excepting in the province of Balkh, where they are excellent, and very numerous, and they are of a strong and active breed, which are exported in considerable numbers." The passage between Candahah and Balkh has been in use at all ages; and when Nadir Shah was besieging Candahah, "the Afghan prince of Candahah had expected aid from the chief of Balkh, against whom Nadir detached his son, with a chosen body of twelve thousand horse. The prince not only defeated his foe, and took the capital, but passed the Oxus, and gave battle to the monarch of the Uzbegs, who had advanced from Bokhara with an army far out numbering the Persians."†

On leaving Balkh, the next place on the road towards Cabul is the town of Anderab; the missionaries say, "we travelled through several valleys at the foot of the lofty mountains to the south of Balkh, till we arrived at the town of Anderab. This place we found crowded with travellers, for all the goods brought from Bokhara to be sent to the Indies, are carried through the road adjoining Anderab, there being no possibility for beasts of burthen to travel across the mountains."‡ This place, like Balkh, is fortified by a mud wall, of sufficient protection against marauders. It was from Balkh that Alexander advanced with 100,000 men. There are two roads, one of which goes to the city of Cabul, the other to Paishawer, the former is said to be 540 miles, the other 500. The road to Cabul is mentioned as "constantly used in former times, and is so even now; it probably offers no serious obstacle." From Anderab through the defile of the Hindoo Koosh is 100 miles. The kingdom of Cabul has been already mentioned, the invasion of it by the route we have last pointed out is of ancient adoption. Alexander, who passed through the Hindoo Koosh, was followed by Timour, and

other successful warriors. An eminent geographer says, "Cabul has always been considered as the gate of India towards Tartary; it produces every article necessary to human life."* At Cabul the army gets into the road already treated of. The time required for reaching the Indus by this route, according to the estimate we have formed of the distances, cannot be less than one month from the Caspian to Khiva, two months from Khiva by the Oxus to Balkh, and nearly the same time to reach the Indus from the latter place. There is a facility of conveyance by water which makes it worthy of the greatest attention, especially if boats are procurable to the necessary extent in the sea of Aral, and if there is an easy communication from thence to Khiva. If such should prove to be the case, land-carriage between Russia and the Indus will be reduced to less than one thousand miles. A few remarks will be further offered on the subject as we consider the remaining line of advance.

The route that remains for enquiry is to the east of the Sea of Aral, and has also occupied the attention of the Russian government, who, in the year 1813-14, dispatched a mission to the city of Kokhand, which lies about mid-way between the south frontier of Russia and the northern boundary of India. Monsieur Nazaroff was employed on this occasion, and an account of his journey† affords some useful information as a practical operation, and for the insight it gives into the distant and obscure region of which it treats. Another mission, which has been already alluded to, described by Baron Mayendorf, crossed this country in proceeding to Bokhara. The escort to accompany the last named mission assembled at the city of Orenburgh, and comprised about 500 men, with 25 wagons, having three horses each, besides two or three hundred other horses; there were also between 300 and 400 camels, and the whole convoy was provided with two months' provisions. Cannon were taken as part of the *materiel*, and also pontoons to enable the party to cross such rivers as might intercept the march. The route lay across a country which has been thus described: "In many parts of it are vast sandy deserts, which are in a manner impassable to any but those who travel in caravans, and who carry their provisions along with them. But in many of the provinces there is some land, which would at any time afford a sufficient subsistence for the people; but they are so much addicted to roving and wandering abroad, that they neglect agriculture, choosing rather to live by

* Mayendorf.

† Missionaries in Coxe's Travels.

* Elphinstone.

† Sir John Malcolm.

‡ Missionaries in Coxe's Travels.

* Reynell.

† Notices of certain tribes and countries in the central part of Asia

plunder." When the escort had journeyed 500 miles, they reached the River Sir-Deria, or Jaxartes, communicating with the Sea of Aral. The banks of this river are like the Nile for verdure; it is navigable for rafts and small boats from its mouth for 500 or 600 miles in a S. E. direction to the city of Kokhand, through a country occupied with hordes of Khirgees Tartars. M. Nazaroff says, that in approaching Kokhand, tents of wandering tribes are exchanged for houses of resident cultivators. Numerous branches of the river irrigate extensive tracts, amidst which are villages and other demonstrations of superior civilization. The party going to Bokhara passed the Jaxartes river in the month of December, over ice, and proceeded 500 miles further to reach their destination. The march of this escort was attended with difficulties and losses, and crossed a country marked by natural obstacles, that would prevent its being resorted to for the passage of troops unless in extremity. This experimental march has, however, produced important results; and shews that the passing of deserts and steppes for a much greater distance than any that offer in the preceding routes may be rendered practicable with proper arrangements. The time required to perform the journey is another point that is applicable to our subject. From Orenburgh to Bokhara is 1000 miles, and its performance took 70 days, through a country occupied by erratic and marauding hordes of Tartars. It is also a proof that no decided opposition is likely to arise from such people. There can be little doubt but their inclination and interest would urge them to assist any enterprise that held out the joint prospect of employment and plunder. Although the passage alluded to, offers no encouragement for an advance in the direction here treated of, it remains to be decided what facilities a Russian expedition would find if they approached Kokhand from the Sea of Aral by means of the Sir, or Jaxartes river.

The Sea of Aral, which has a coast of 800 miles, and which is the resort of numerous Russian fishermen, is not separated from the Caspian Sea at the narrowest part by a greater distance than 100 miles. Flat-bottomed boats or rafts might be readily conveyed to assist the resources to be found on the Sea of Aral, and an advance might be made up the river, on the banks of which cattle would be found in abundance. It is said, for 20 miles from its mouth, to have its banks covered with vegetation 12 or 14 miles wide, and its course marked by a line of verdure.

The result of these missions has not been divulged, to enable an opi-

nion to be formed how far the local governments would be inclined to assist or oppose the passing of a Russian force. It would be too dangerous an experiment even for the hardened Cossack to venture on such an extended field of operations as would there be presented, unless a safe conduct were guaranteed by the government of the country, more especially if the desolate regions that intervene were rendered still less accessible by a hostile feeling on the part of the inhabitants. On the other hand, there does not appear to be any natural obstacle, or a cause for doubt, of a force being enabled to proceed southward from Kokhand, should a favourable disposition exist with the chief of that nation to forward the project. To come to any satisfactory conclusion on this head, it would be necessary to obtain correct knowledge concerning the modern tribes, who are the descendants of the followers of the famed Sultan Timoor, and the warlike chief Ghengis Khan. The Sultan Villiami, who now holds his court at Kokhand, is said to be rapidly extending his influence, and already to comprehend many adjoining districts within his rule. His subjects are estimated at three and a half millions.

We shall suppose that advantageous overtures, and the prospect of dividing the plunder of Hindooostan, have overcome the spirit of intolerance and the prejudices of barbarism, and that an alliance is formed between the Emperor of Russia and the Sultan of Kokhand. The designs of Russia being also assisted by the favourable channel of communication by means of the Jaxartes to the territory we are treating of, a Russian force may be assembled at Kokhand as a base for operations towards India. The distance the troops would have to cross from their place of rendezvous to arrive at Balkh, would be about 340 miles. The route passes through the districts of Samarkand and other cultivated tracts equally favourable to the project in view.

Samarkand is about one hundred and sixty miles from Kokhand, and has been mentioned in the last route. The city, which gives the name to the province, is about two degrees from the river Oxus. On entering this district from the east, the Missionaries, Duhalde and Le Compte, travelled ten days over a most delightful country, when they entered the city, situated in a valley on the banks of a river called Sogd, and known to the ancients by the name of Sogdyana. Several other towns are described in this vicinity, lying in delightful plains, and watered by rivers falling into the Oxus or Amu; and their favourable account of this part of Asia is borne out by the following remark of

a modern date.* "The Sogd for eight days' journey is all delightful country, affording fine prospects, and fields and valleys, running streams, reservoirs and fountains, both on the right hand and on the left; you pass from corn fields into rich meadows and pasture lands, and the straits of Sogd are the finest in the world." From Samarkand to the Oxus is about one hundred and twenty miles, and mid-way between them is the city of Kurshi, already remarked as having the neighbouring lands exceeding fertile in all sorts of grain and fruit: a considerable trade is carried on from this place to the northern ports of India.† Continuing onwards towards Cabul, the Oxus would be crossed about sixty miles from Balkh; and the whole distance from Kokhand to the latter city would be about 340 miles. The means of transporting and of subsisting the army in their passage across this territory cannot be doubted, when it is considered that the whole country is one great pasture, covered with flocks and herds, and occupied by a pastoral people, whose principal source of traffic is their cattle. It is from the countries on the borders of the Oxus or Amu that foreign markets are supplied with horses, and we find the Khirgees Tartars sell 60,000 sheep and 10,000 horses annually in the market of Orenburgh.‡ It is also mentioned that "Russia contains several colonies of Bokharians, who are settled in many large towns of the southern provinces, and maintain a constant communication with the merchants of their own country.§

About the middle of the last century, Nadir Shah, after his conquest in India, made a display of his wealth at Herat, and marched from that city with an army to Balkh. He crossed the Oxus in the middle of August, and proceeded against Bokhara, which city surrendered to the arms of the conqueror. Nadir settled the government in his newly acquired territory, and turned his arms against the province of Khaurizm. He subdued the country on both sides the Oxus, as far as the Caspian Sea, and defeated the forces of Khaurizm, whose prince he made prisoner. It was far advanced in the winter when he marched to Kelat, his favourite residence, situated about a degree north of Mushed, a city mentioned in the route between the Caspian and Herat. Although we do not possess materials for making a satisfactory investigation of the Eastern lines of advance, there has been sufficient shewn to render them worthy of further consideration,

* Sir William Ousley.

† Duhalde and Le Compte.

‡ Coxe's Travels.

§ Ibid.

and the interest they command must be increased when we know that the Russians have turned their attention particularly to this quarter. "They have surveyed the Oxus with great care; and all the country to India. They are establishing a military colony at Khiva. Further, it is supposed, they have steam navigation in view; to serve this purpose there is coal about the sea of Aral."* From Balkh, the approach to the Indus has already been considered.

If the Russian government were to provide boats on the sea of Aral, and determine to approach India by a *coup de main*, a force could apparently ascend the Jaxartes river to Kokhand, a distance of five or six hundred miles, in six weeks. A corps of Tartars having been attached to the army at Kokhand, the necessary arrangements might be made for the march to Balkh. This march of three hundred and forty miles would occupy about a month and a half. Then, as no delay is to be anticipated at Balkh, the force would reach the banks of the Indus by the route we have already noticed in six weeks from their arrival at Balkh, being altogether a period of four or five months from the time of their leaving the territory of Russia.

This and the preceding sketch will make it evident that an invasion of India may be effected in the course of a few months by routes beyond the control of European nations. It must also be apparent, that the wide extent of the Russian frontier enables that power to advance on India, regardless of the position which Persia may assume. This state of things, added to the low condition of the Persian finances, and other causes already stated, shew the helpless dependence of that country on the forbearance of its powerful neighbour, and, consequently, the necessity of becoming a party in her designs. With this double power of action, it will be admitted that the position of Russia is sufficiently formidable to demand some investigation of the British means of defence on the north-west side of our Eastern Empire.

At present, the advance British station in India is on the Sutlej, or the eastern river of the Punjab, and at a distance of 200 miles from the Indus. The intermediate country is thus described by Mr. Elphinstone: "Almost the whole of the Punjab belongs to Runjet Singh, who in 1805 was but one of many chiefs, but who, when we passed, had acquired the sovereignty of all the Sheiks in the Punjab, and was assuming the title of king. Towards the east his

territories are bounded by States under the protection of the British, but on all the other sides he is busied in subjugating his weak neighbours, by the same mixture of force and craft that he so successfully employed against the chiefs of his own nation." The above historian also remarks: "The whole of our journey across the tract between the Indus and the Hydaspes was about 160 miles; for which space the country is among the strongest I have ever seen.—I was greatly struck with the difference between the banks of this river, (the Hydaspes;) the left bank had all the characteristics of the plains of India; it was, indeed, as flat and as rich as Bengal, which it greatly resembled." "The soil of Scind, which is watered by the Indus, is described to be extremely fertile. Cattle, horses, and camels, more celebrated than any in the East, are said to be produced there in abundance."*

North of the Punjab the province of Cashmere comprises mountains that project from the snow-clad peaks of the Hemalaya range. This wild region is intersected by deep chasms, the sources of rivers and torrents, and is impracticable for the march of a European force. The province of Moulstan forms the southern portion of the Punjab, and before leaving this district the five rivers are contributors to the majestic stream of the Indus, which in its course from the Punjab to the ocean cuts in a diagonal direction the province of Scind, that extends in length 300 miles, and in breadth 80 miles.

The whole of the territory above described, extending from impracticable mountains to the sea, is held by neutral nations, and is filled with military adventurers. It corresponds to the following account: "When the British and Mahratta armies entered the Punjab, they were both daily joined by discontented petty chiefs of the Sikhs, who offered their aid to the power that would put them in possession of a village or a fort, from which, agreeable to their statement, they had been unjustly excluded by a father or a brother."† Of the force of Runjet Singh, the same authority says, "His army is now more numerous than it was, but it is composed of materials which have no natural cohesion, and the first serious reverse which it meets with will, probably, cause its dissolution."

An invading army, by crossing at the junction of the rivers of the Punjab, to proceed to Lahore, would pursue a route in constant use. It was followed in 1797 by the Afghan monarch, Zemaun Shah, with

33,000 men. The circumstance is thus noticed by Sir John Malcolm:—"The facility with which he advanced to Lahore shewed that no confidence could be placed in the union or resistance of the Sheiks." An invading force could also cross the Indus below the Punjab, and by passing through Scind, it would enter the provinces of Guzerat and Malwa, and thereby establish itself in one of the finest portions of Hindoostan.

Should a Russian force arrive at Candahah with the intention of invading India, its further advance would be on one or more of the points described. The northern portion of the Punjab and the province of Cashmere could be defended by British troops brought up the Ganges from the Presidency of Bengal; and on this river spirited and successful exertions are making to render steam vessels available to general purposes. A glance at the Map will shew that the southern portion of the Punjab and the territory from thence to the sea, can only be defended by the introduction of a flotilla on the Indus, and by the advance of troops from the Presidencies of Madras and Bombay.

Lahore, the capital of Runjet Singh, is on the Ravey river, which runs into the Indus, and is distant from the sea by the course of the river about 1000 miles. Throughout this extent there are no shoals or rocks. The current does not exceed two and a half knots per hour, and the depth of water is never less than 15 or 20 feet. Native vessels of about 75 tons English perform the inland navigation. The breadth of the stream at Lahore is 300 yards. Lower down at Moulstan, where some of the central rivers unite, Mr. Elphinstone crossed, and here the passage was more than 1000 yards. In its course through Scind the Indus varies from half a mile to a mile in breadth. Towards the head of the river at Attock it is 260 yards wide, and above the latter place it spreads into a plain, forming a lake spotted with islands. This is the only place where the Indus is fordable, and here it would be easily defended. No native chief on the banks of the Indus has any thing approaching an army, except it be Runjet Singh, who is now deemed the undisputed sovereign of both the Punjab and Cashmere. This prince is favorably disposed to an alliance with the British government; and our connexion with him should be sedulously cultivated, as he possesses a country, which, beyond all others, is essential to the defence of India. On the inland navigation of the Punjab, the following are the remarks of an intelligent officer who recently sailed from the sea to Lahore: "There are few rivers in the world where steam might

* Evidence taken before a Select Committee on Affairs of India, and printed.

† Evidence, &c.

† Sir John Malcolm.

DEFENCE OF BRITISH INDIA FROM RUSSIAN INVASION.

be used with better effect than on the Indus. The Americans use wood for fuel, and the supply of it on the Indus would never be exhausted."

Of Lahore, which lies about midway between the mountains and the sea, the following important notice is found in Hamilton's Gazetteer, a work too well known for accuracy of detail to require remark:—"The Lahore province, from its commanding situation, possesses many advantages over the rest of India, and under a regular government would alone be sufficient to form a basis of a powerful and civilized kingdom. The productive powers of the southern half, intersected by five noble rivers, might easily be renovated, and with the natural strength and temperate climate of the northern, unite circumstances in its favour that rarely occur together. These advantages, added to its geographical position, as the only assailable quarter, point it out as the country from whence Hindooostan is to be ruled, conquered, and defended."

It requires no argument to shew, that in case of India being threatened by invasion, the Indus must become the frontier for a British force to rendezvous. A powerful ally might then be expected in the Afghan nation, whose strong country would be a formidable barrier when defended by European and native tactics combined. Each river of the Punjab will, in case of retreat, mark a position for a stand; and should an invading army ever reach the Sutledge, it will be after a series of hard-earned victories, and so exhausted as to be quite incapable of opposing the reception prepared for it on the frontier of British India. But how different would be the fate of the invaders, if allowed to possess themselves of the Punjab. An army of hardened adventurers would be assembled to assist in further operations, the territories above described would be organized, and if the invaders were defeated at the Sutledge, the strong country referred to would admit of their holding out until reinforcements arrived, or until disaffection in other parts of the widely extended empire led to the separation of the British force.

Independent of the navigable nature of the Ravey to Lahore, and of the other rivers that flow into the Indus, the latter is said to be so high as to Attock. By means of such channels of communication,

the advantage of steam vessels to transport troops to the scene of operations, free from the exhausting effects of a march in a tropical climate, would be incalculable, and the ready supply of *matériel* would also be of the first importance. The rate of steam passage on the Ganges, which has nearly the same current as the Indus, has been more than three miles per hour in ascending the river. Five miles per hour may be taken as the average speed for steam vessels in river navigation. The voyage between Lahore and Bombay will therefore occupy less than a fortnight. From Bombay to Ceylon a week would be required for the voyage; a further time of three days would reach Madras. A steamer in the Indian Seas towed a ship of 380 tons having a cargo, at a rate of from $5\frac{1}{2}$ to 7 knots an hour, and against a strong monsoon at the rate of $3\frac{1}{2}$ knots an hour. In the voyage from Bombay to Ceylon other stations of European corps are passed. Much more might be added in favour of the immediate introduction of steam vessels on the west coast of India. We will only remark, that the distance by route from Madras to Lahore is 1675 miles, or six months' march. The distance from Bombay to the same place is about a third less than the above. The application of steam vessels as tugs to assist in emergency in transporting troops from the Mediterranean Sea to India is also worthy of grave consideration. A less time than two months would perform this service. At present there is but one efficient steam vessel on the Bombay side of India, which has been mentioned in another part of this work. It is the Hugh Lindsay, a man-of-war steamer, perfectly unfitted for river navigation. It remains to be determined whether three first rate steam vessels shall be immediately introduced into the Bombay marine, by the adoption of the proposed project for steam packet communication; and if so, it must be evident that branch steamers will follow. An extensive school will be thus established for the practice of an art on which the safety of the Indian Empire may at no very distant period in a great measure depend.

It is unnecessary for our purpose fully to discuss the existing means of assembling a large force in the north-west frontier of British India, or the time that would be required for such an operation. Encumbered as troops in tropical countries necessarily are with baggage,

stores, and numerous attendants, their progress on an extended line of route cannot be estimated at more than sixty miles a week. The number of cattle put in requisition on these occasions, from the donkey to the elephant, are almost as numerous as are the camp followers, and the latter may average 15,000 for each regiment, including those of departments and for the general staff of the army. In reference to the foregoing enquiry, it is important to bear in mind that the marching of troops is from necessity suspended for three or four months in the year, or from June until the termination of the rainy season. Nor should it be forgotten that the same source of obstruction does not extend to countries north of the Hemalaya range.

A few remarks are yet called for respecting the defence of the sea-approaches to India in case of war. The possession by Great Britain of the Cape of Good Hope and St. Helena, which are requisite as stations for depôts of fuel to enable steam vessels to navigate between the Eastern and Western World, would seem to exclude hostile vessels of that description from the Indian Ocean. And in those seas where for two-thirds of the year light winds and calms prevail, no sailing vessel could withstand the attack of powerful steamers, such as the British government might employ. The commercial intercourse between India and England, if carried on through Egypt, would be protected on this side by our fleets, to sail between Alexandria and this country; and by giving convoys over a distance of about 3200 miles, or less than one-fourth of the route at present followed *via* the Cape of Good Hope. This line to be defended would also be strengthened by having the fortresses of Malta and Gibraltar breaking it at almost regular intervals. Besides the security given to trade by adopting the above arrangements, they would allow of a naval force being concentrated in a quarter where, in times of European war, it is most desirable a superiority should be maintained. These are a few of the advantages which suggest themselves as likely to result from a general introduction of steam vessels into the Eastern Seas. Further, as an additional inducement to follow up the plan, it has been announced that coal has been found near Attock on the Indus, and there are means of obtaining the same article in the province of Cutch, which is situated at the entrance of that river.

THE END.



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